BRUHAT BANGALORE MAHANAGARA PALIKE

YELAHANKA ZONE

Estimate Cost Rs. 15000000.00

Name of Work: Improvements to roads and drains at Kurlappa layout munithimmayya layout in kempegowda ward no-01 of yelahanka sub division

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
	for RCC drain								
1	KSRB 2-2.1 : Earthwork excavation by manual means for foundation of buildings, culverts, water supply and sanitary lines and electrical conduits etc, either in pits or in trenches 1.5m and above in width, in ordinary soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. including breaking of clods complete as per specifications. No. KBS 2.1 (a) I 2.3.5 page no 6	cum							
	for RCC drain								
	Kurlappa layout 3rd cross RHS road		2	27.00	1.00	1.00	54.00		
	Kurlappa layout 5th cross RHS road		2	21.00	1.00	1.00	42.00		
	Kurlappa layout 6th cross RHS road		2	30.00	1.00	1.00	60.00		
	Kurlappa layout 7th cross RHS road		2	35.00	1.00	1.00	70.00		
	Kurlappa layout 8th cross road		2	125.00	1.00	1.00	250.00		
	Kurlappa layout 8th cross A cross road		2	44.00	1.00	1.00	88.00		
	Kurlappa layout 8th cross B cross road		1	44.00	1.00	1.00	44.00		
	Kurlappa layout 9th cross RHS road		1	36.00	1.00	1.00	36.00		
	Kurlappa layout 10th cross RHS road		1	38.00	1.00	1.00	38.00		
	Kurlappa layout cross road		2	120.00	1.00	1.00	240.00		
	for Culvert								
	Kurlappa layout 9th cross RHS road		3	5.00	1.65	1.20	29.70		
	Kurlappa layout 10th cross RHS road		2	5.00	1.65	1.20	19.80		
	Basic Rate	299.00					971.50	399.07	387695.34
	Area Weightage 6%	17.94							
	Grand Total	316.94							
	Loading and unloading + Basic Rate for Haulage upto 8.00 k.m =(1.28 X 2.50 X 8)+ 57	77.48							
	Area Weightage 6%	4.65							
		399.07							

2	**KSRRB M300-14. Excavation for roadwork in all types of soil by mechanical means** including cutting and loading to tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transportation with a lead of 1.00 km and complete as per specifications. MORTH Specification No.301 Page No.143. Item No.19.14	cum							
	for CC road								
	Kurlappa layout main road		1	150.00	5.50	0.20	165.00		
	Kurlappa layout 6th main road		2	30.00	4.00	0.20	48.00		
	Kurlappa layout 7th cross road		2	35.00	3.00	0.20	42.00		
	Kurlappa layout 3rd cross RHS & LHS road		2	27.00	4.00	0.20	43.20		
	Kurlappa layout 5th cross RHS&LHS road		1	67.00	5.00	0.20	67.00		
	Kurlappa layout 6th cross RHS&LHS road		2	30.00	4.00	0.20	48.00		
	Kurlappa layout 7th cross RHS&LHS road		1	78.00	5.00	0.20	78.00		
	Kurlappa layout 8th cross road		1	125.00	5.00	0.20	125.00		
	Kurlappa layout 8th cross A cross road		1	44.00	4.50	0.20	39.60		
	Kurlappa layout 8th cross B cross road		1	44.00	4.50	0.20	39.60		
	Kurlappa layout 9th cross RHS&LHS road		2	36.00	4.00	0.20	57.60		
	Kurlappa layout 10th cross RHS&LHS road		2	38.00	5.00	0.20	76.00		
							829.80	**125.59**	**104214.00**
	Basic Rate	41.00							
	Area Weightage 6%	2.46							
	Grand Total	43.46							
	Loading and unloading + Basic Rate for Haulage upto 8.00 k.m =(1.28 X 2.50 X 8)+ 57	77.48							
	Area Weightage 6%	4.65							
		125.59							
3	**KSRB 4-1.7 : Providing and laying in position plain cement concrete of Mix 1:3:6 with OPC @ 220kgs, with 20mm and down size graded granite metal coarse aggregates @0.69 cum** and fine aggregtes @ 0.56cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2 Page No.13 Item No.4.7	cum							
	for RCC drain								
	Kurlappa layout cross road		2	120.00	1.00	0.15	36.00		

	Kurlappa layout 3rd cross RHS road		2	27.00	1.00	0.15	8.10		
	Kurlappa layout 5th cross RHS road		2	21.00	1.00	0.15	6.30		
	Kurlappa layout 6th cross RHS road		2	30.00	1.00	0.15	9.00		
	Kurlappa layout 7th cross RHS road		2	35.00	1.00	0.15	10.50		
	Kurlappa layout 8th cross road		2	125.00	1.00	0.15	37.50		
	Kurlappa layout 8th cross A cross road		2	44.00	1.00	0.15	13.20		
	Kurlappa layout 8th cross B cross road		1	44.00	1.00	0.15	6.60		
	Kurlappa layout 9th cross RHS road		1	36.00	1.00	0.15	5.40		
	Kurlappa layout 10th cross RHS road		1	38.00	1.00	0.15	5.70		
	for Culvert								
	Kurlappa layout 9th cross RHS road		3	5.00	1.50	0.15	3.38		
	Kurlappa layout 10th cross RHS road		2	5.00	1.50	0.15	2.25		
							143.93	**5627.54**	**809944.00**
	Basic Rate	5309.00							
	Area Weightage 6%	318.54							
	Grand Total	**5627.54**							
4	Providing **and laying plain/reinforced cement concrete for side drains using M20 nominal mix concrete with OPC at 300 kgs.** with 20mm and down size granite metal coarse aggregates at 0.69 cum and fine aggregates at 0.43 cum machine mixed, well compacted for walls and bottom including centering, shuttering, cost of materials, HOM of machinery, curing etc., complete excluding cost of steel as per MORTH specification No. 1500, 1700, 2200. including cost of materials, labour, HOM complete as per specifications. Page No.270. Item No.37.59.1	**cum**							
	for RCC drain								
	Kurlappa layout cross road		2	120.00	0.90	0.15	32.40		
	Kurlappa layout 3rd cross RHS road		2	27.00	0.90	0.15	7.29		
	Kurlappa layout 5th cross RHS road		2	21.00	0.90	0.15	5.67		
	Kurlappa layout 6th cross RHS road		2	30.00	0.90	0.15	8.10		
	Kurlappa layout 7th cross RHS road		2	35.00	0.90	0.15	9.45		
	Kurlappa layout 8th cross road		2	125.00	0.90	0.15	33.75		
	Kurlappa layout 8th cross A cross road		2	44.00	0.90	0.15	11.88		
	Kurlappa layout 8th cross B cross road		1	44.00	0.90	0.15	5.94		

	Kurlappa layout 9th cross RHS road		1	36.00	0.90	0.15	4.86		
	Kurlappa layout 10th cross RHS road		1	38.00	0.90	0.15	5.13		
							124.47		
	for Culvert								
	Kurlappa layout 9th cross RHS road		3	5.00	1.20	0.25	4.50		
	Kurlappa layout 10th cross RHS road		2	5.00	1.20	0.25	3.00		
							7.50		
	for WALL concrete								
	for RCC drain								
	Kurlappa layout cross road		2x2	120.00	0.15	0.7	50.40		
	Kurlappa layout 3rd cross RHS road		2x2	27.00	0.15	0.7	11.34		
	Kurlappa layout 5th cross RHS road		2x2	21.00	0.15	0.7	8.82		
	Kurlappa layout 6th cross RHS road		2x2	30.00	0.15	0.7	12.60		
	Kurlappa layout 7th cross RHS road		2x2	35.00	0.15	0.7	14.70		
	Kurlappa layout 8th cross road		2x2	125.00	0.15	0.7	52.50		
	Kurlappa layout 8th cross A cross road		2x2	44.00	0.15	0.7	18.48		
	Kurlappa layout 8th cross B cross road		2	44.00	0.15	0.7	9.24		
	Kurlappa layout 9th cross RHS road		2	36.00	0.15	0.7	7.56		
	Kurlappa layout 10th cross RHS road		2	38.00	0.15	0.7	7.98		
							193.62		
	for Culvert wall								
	Kurlappa layout 9th cross RHS road		6	5.00	0.230	0.90	6.21		
	Kurlappa layout 10th cross RHS road		4	5.00	0.230	0.90	4.14		
							10.35		
							335.94	**7273.72**	**2443533.00**
	Basic Rate	6862.00							
	Area Weightage 6%	411.72							
	Grand Total	**7273.72**							
5	KSRRB M 2200-6 **Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting,** bending, hooking, placing in position, lapping and or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. MORTH Specification No 1600 & 2200 TMT Bars Fe 500 Page No 229 I. No 28.8.2 SR 18-19	Tn							

	for RCC drain 60 kg/cum		0.060	318.09			19.09		
	for RCC culvert 90 kg/cum		0.090	17.85			1.61		
				335.94			20.69	72326.98	1496583.00
	Basic Rate	68233.00							
	Area Weightage 6%	4093.98							
	Grand Total	72326.98							
6	**Providing and Fixing pre cast covering Slab made out of CC 1:2:4 with 10cm thick and Finishing cutting**, including form work, cost of alll materials, labour,hire charges of chinery,loading ,unloading ,lead and lift, transportation etc ,copmplete. (Data Rate)	Sqm							
	for RCC drain								
	Kurlappa layout cross road		2	120.00	0.90		216.00		
	Kurlappa layout 3rd cross RHS road		2	27.00	0.90		48.60		
	Kurlappa layout 5th cross RHS road		2	21.00	0.90		37.80		
	Kurlappa layout 6th cross RHS road		2	30.00	0.90		54.00		
	Kurlappa layout 7th cross RHS road		2	35.00	0.90		63.00		
	Kurlappa layout 8th cross road		2	125.00	0.90		225.00		
	Kurlappa layout 8th cross A cross road		2	44.00	0.90		79.20		
	Kurlappa layout 8th cross B cross road		1	44.00	0.90		39.60		
	Kurlappa layout 9th cross RHS road		1	36.00	0.90		32.40		
	Kurlappa layout 10th cross RHS road		1	38.00	0.90		34.20		
							829.80	**2337.00**	**1939243.00**
	Date Rate	**2337.00**							
7	**Providing and Fixing pre cast covering Slab 250mm thick made out of CC 1:2:4 and jelly 20mm Down size with steel reinforcement** including form work,curing,including cost of alll materials, labour,hire charges of machinery, loading, unloading, lead and lift,transportation etc ,complete.As per Engineer incharge. (Data Rate)	Sqm							
	for Culvert								
	Kurlappa layout 9th cross RHS road		3	5.00	1.20		18.00		
	Kurlappa layout 10th cross RHS road		2	5.00	1.20		12.00		
							30.00	**5418.00**	**162540.00**
	Date Rate	**5418.00**							
	for CC road								

8	**KSRRB M600-1. Construction of dry lean cement concrete mix CC 1:5:10 with OPC cement @160Kgs, with 25mm and down size graded granite metal coarse** aggregate at 0.86cum and fine aggregates @ 0.58cum Sub-base over a prepared sub-grade with (coarse and fine aggregate conforming to IS: 383) aggregate cement ratio not to exceed 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content not to be less than 160 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver with electronic sensor, compacting with 8-10 tonnes vibratory roller, finishing and curing complete as per specifications. MORTH Specification No. 601 of MORTH V Revision and IS 456 Table-5 22.1.1 -do- with OPC at 150 kg/cum and coarse aggregate 0.86cum, fine aggregate 0.58cum using Concrete Batch mix Plant at 75 cum/hr capacity with Slip form paver with electronic sensor Page No.174. Item No.22.1.1	**Cum**							
	Kurlappa layout main road		1	140.00	5.50	0.15	115.50		
	Kurlappa layout 6th main road		2	30.00	4.00	0.15	36.00		
	Kurlappa layout 7th cross road		2	35.00	3.00	0.15	31.50		
	Kurlappa layout 3rd cross RHS & LHS road		2	27.00	4.00	0.15	32.40		
	Kurlappa layout 5th cross RHS&LHS road		1	67.00	5.00	0.15	50.25		
	Kurlappa layout 6th cross RHS&LHS road		2	30.00	4.00	0.15	36.00		
	Kurlappa layout 7th cross RHS&LHS road		1	78.00	5.00	0.15	58.50		
	Kurlappa layout 8th cross road		1	125.00	5.00	0.15	93.75		
	Kurlappa layout 8th cross A cross road		1	44.00	4.50	0.15	29.70		
	Kurlappa layout 8th cross B cross road		1	44.00	4.50	0.15	29.70		
	Kurlappa layout 9th cross RHS&LHS road		2	36.00	4.00	0.15	43.20		
	Kurlappa layout 10th cross RHS&LHS road		2	38.00	5.00	0.15	57.00		
							613.50	**3800.10**	**2331361.0**
	Basic Rate	3585.00							
	Area Weightage 6%	215.10							
	Grand Total	**3800.10**							

9	Constructing un-reinforced, plain cement concrete for pavements using Grade concrete M30 over a prepared base with OPC coarse aggregate at 0.69 cum, fine aggregates at 0.46 cum,Coarse and fine aggregate conforming to 18:383-2016, with Superplastizer at 3 lts conforming to IS 9103-2008. mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). & Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished with floaters in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, including groove cutting charges, joint filler,	Cum							
	for CC road								
	[illegible]ppa layout main road		1	140.00	5.50	0.125	96.25		
	[illegible]pa layout 6th main road		2	30.00	4.00	0.125	30.00		
	[illegible]ppa layout 7th cross road		2	35.00	3.00	0.125	26.25		
	[illegible]appa layout 3rd cross RHS & LHS [illegible]d		2	27.00	4.00	0.125	27.00		
	Kurla[illegible]t 5th cross RHS&LHS road		1	67.00	5.00	0.125	41.88		
	Ku[illegible]out 6th cross RHS&LHS r[illegible]		2	30.00	4.00	0.125	30.00		
	[illegible]yout 7th cross RHS&LHS		1	78.00	5.00	0.125	48.75		
	[illegible] layout 8th cross road		1	125.00	5.00	0.125	78.13		
	[illegible]a layout 8th cross A cross		1	44.00	4.50	0.125	24.75		
	[illegible]ppa layout 8[illegible]B cross		1	44.00	4.50	0.125	24.75		
	[illegible]rlappa layou[illegible] RHS&LHS [illegible]oad		2	36.00	4.00	0.125	36.00		
	Kurlappa l[illegible]ross RHS&LHS road		2	38.00	5.00	0.125	47.50		
							511.25	5210.96	2664103.00
	Basic Rate	4916.00							
	Area Weightage 6%	294.96							
	Grand Total	**5210.96**							
	[illegible]ater harvesting work [illegible]g 40mm jelly, 20mm jelly [illegible] sand, fine sand, 12.50 mm [illegible] as per data rates	Nos	12				12	20882.00	250584.00

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						Total construction cost				12589800.34
						GST 12%				1510776.04
						DPR & PMC 2%				251796.01
						Tender premium 5%				629490.02
										18138.00
11	Miscellaneous charges								Total	15000000.00

(Rupees One Crore Fifty lakh Only)

CERTIFICATE

1 The work spot has been inspected and the work is found necessary.
2 This estimate is prepared as per C.S.R. of 2018-19
3 The provisions were made in this estimate are necessary and adequate.
4 This works come under B.B.M.P. limits.

Assistant Engineer

Assistant Executive Engineer
Yelahanka Sub Division
Bangalore-64

Executive Engineer
Yelahanka Division
Bangalore-64

BRUHAT BANGALORE MAHANAGARA PALIKE

YELAHANKA ZONE

Estimate Cost Rs.	20000000.00

Name of Work: Improvements to balance road and drain at lake view layout main road and cross road in kempegowda ward no -01 of yelahanka Sub division.

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
1	KSRRB M300-14. Excavation for roadwork in all types of soil by mechanical means including cutting and loading to tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transportation with a lead of 1.00 km and complete as per specifications. MORTH Specification No.301 Page No.143. Item No.19.14	cum							
	for CC road								
	RHS main road 2nd cross RHS		1	20.00	6.00	0.20	24.00		
	RHS main road 3rd cross RHS		1	20.00	6.00	0.20	24.00		
	RHS main road 2nd cross LHS		1	20.00	6.00	0.20	24.00		
	RHS main road 4th cross RHS		1	20.00	6.00	0.20	24.00		
	for Asphalt road								
	Lake view layout main road		1	475.00	7.00	0.30	997.50		
	Lake view layout 1st cross road LHS		1	37.00	7.00	0.30	77.70		
							1171.20	**125.59**	**147090.00**
	Basic Rate	41.00							
	Area Weightage 6%	2.46							
	Grand Total	43.46							
	Loading and unloading + Basic Rate for Haulage upto 8.00 k.m =(1.28 X 2.50 X 8)+ 57	77.48							
	Area Weightage 6%	4.65							
		125.59							
2	KS[illegible]2.1 : Earthwork [illegible] by manual means for [illegible]n of buildings, culverts, [illegible]pply and sanitary lines and [illegible]cal conduits etc, either in pits or [illegible]enches 1.5m and above in [illegible]th, in ordinary soil not [illegible]ceeding 1.5 m. in depth including [illegible]ressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. including breaking of clods complete as per specifications. No. KBS 2.1 (a) I 2.3.5 page no 6	cum							
	for RCC drain								
	Lake view layout 2nd main road balance RCC drain		1	180.00	0.90	0.90	145.80		
	Lake view layout 3rd main road		2	316.00	0.90	0.90	511.92		

	1st cross road (3rd main road)		2	37.00	0.90	0.90	59.94		
	1st cross road (4th main road)		2	37.00	0.90	0.90	59.94		
	RHS main road 2nd cross LHS		2	30.00	0.90	0.90	48.60		
	RHS main road 2nd cross RHS		2	150.00	0.90	0.90	243.00		
	Cross road		1	40.00	0.90	0.90	32.40		
	for culverts								
	Lake view layout 1st cross road LHS		3	7.00	1.65	1.20	41.58		
	RHS main road 1st cross LHS		1	6.00	1.65	1.20	11.88		
	RHS main road 2nd cross RHS		1	6.00	1.65	1.20	11.88		
	for kerb								
	Lake view layout 2nd main road balance RCC drain		2	250.00	0.165	0.25	20.63		
	1st cross road (3rd main road)		2	37.00	0.165	0.25	3.05		
	1st cross road (4th main road)		2	37.00	0.165	0.25	3.05		
	RHS main road 1st cross LHS		2	30.00	0.165	0.25	2.48		
	RHS main road 2nd cross RHS		2	150.00	0.165	0.25	12.38		
							1208.52	**399.07**	**482283.00**
	Basic Rate	299.00							
	Area Weightage 6%	17.94							
	Grand Total	316.94							
	Loading and unloading + Basic Rate for Haulage upto 8.00 k.m =(1.28 X 2.50 X 8)+ 57	77.48							
	Area Weightage 6%	4.65							
		399.07							
3	**KSRB 4-1.7 : Providing and laying in position plain cement concrete of Mix 1:3:6 with OPC @ 220kgs, with 20mm and down size graded granite metal coarse aggregates @0.69 cum** and fine aggregtes @ 0.56cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2 Page No.13 Item No.4.7	cum							
	for RCC drain								
	Lake view layout 2nd main road balance RCC drain		1	180.00	0.90	0.15	24.30		
	Lake view layout 3rd main road		2	316.00	0.90	0.15	85.32		
	1st cross road (3rd main road)		2	37.00	0.90	0.15	9.99		
	1st cross road (4th main road)		2	37.00	0.90	0.15	9.99		
	RHS main road 2nd cross LHS		2	30.00	0.90	0.15	8.10		
	RHS main road 2nd cross RHS		2	150.00	0.90	0.15	40.50		
	Cross road		1	40.00	0.90	0.15	5.40		
	for culverts								
	Lake view layout 1st cross road LHS		3	7.00	1.50	0.15	4.73		
	RHS main road 1st cross LHS		1	6.00	1.50	0.15	1.35		
	RHS main road 2nd cross RHS		1	6.00	1.50	0.15	1.35		
	for kerb pcc								

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	Lake view layout 2nd main road balance RCC drain		2	250.00	0.165	0.10	8.25		
	1st cross road (3rd main road)		2	37.00	0.165	0.10	1.22		
	1st cross road (4th main road)		2	37.00	0.165	0.10	1.22		
	RHS main road 1st cross LHS		2	30.00	0.165	0.10	0.99		
	RHS main road 2nd cross RHS		2	150.00	0.165	0.10	4.95		
							207.66	**5627.54**	**1168598.00**
	Basic Rate	5309.00							
	Area Weightage 6%	318.54							
	Grand Total	5627.54							
4	Providing and laying **plain/reinforced cement concrete for side drains using M20 nominal mix concrete with OPC at 300 kgs.** with 20mm and down size granite metal coarse aggregates at 0.69 cum and fine aggregates at 0.43 cum machine mixed, well compacted for walls and bottom including centering, shuttering, cost of materials, HOM of machinery, curing etc., complete excluding cost of steel as per MORTH specification No. 1500, 1700, 2200. including cost of materials, labour, HOM complete as per specifications. Page No.270. Item No.37.59.1	**cum**							
	for bed								
	for RCC drain								
	Lake view layout 2nd main road ba[illegible]ce RCC drain		1	180.00	0.90	0.15	24.30		
	[illegible]ew layout 3rd main road		2	316.00	0.90	0.15	85.32		
	[illegible]ss road (3rd main road)		2	37.00	0.90	0.15	9.99		
	[illegible]oss road (4th main road)		2	37.00	0.90	0.15	9.99		
	[illegible] main road 2nd cross LHS		2	30.00	0.90	0.15	8.10		
	[illegible]S main road 2nd cross RHS		2	150.00	0.90	0.15	40.50		
	[illegible]ross road		1	40.00	0.90	0.15	5.40		
	for culverts								
	Lake view layout 1st cross road LHS		3	7.00	1.20	0.25	6.30		
	RHS main road 1st cross LHS		1	6.00	1.20	0.25	1.80		
	RHS main road 2nd cross RHS		1	6.00	1.20	0.25	1.80		
	for side walls							**9.90**	
	for RCC drain								
	Lake view layout 2nd main road balance RCC drain	1x2	2	180.00	0.15	0.75	40.50		
	lake view layout 3rd main road	2x2	4	316.00	0.15	0.75	142.20		
	1st cross road (3rd main road)	2x2	4	37.00	0.15	0.75	16.65		
	1st cross road (4th main road)	2x2	4	37.00	0.15	0.75	16.65		
	RHS main road 2nd cross LHS	2x2	4	30.00	0.15	0.75	13.50		
	RHS main road 2nd cross RHS	2x2	4	150.00	0.15	0.75	67.50		
	Cross road	1x2	2	40.00	0.15	0.75	9.00		
	for culverts wall								

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	Lake view layout 1st cross road LHS	3x2	6	7.00	0.230	0.90	8.69		
	RHS main road 1st cross LHS		2	6.00	0.230	0.90	2.48		
	RHS main road 2nd cross RHS		2	6.00	0.230	0.90	2.48	13.66	
							513.16	**7273.72**	**3732597.00**
	Basic Rate	6862.00							
	Area Weightage 6%	411.72							
	Grand Total	7273.72							
5	**KSRRB M 2200-6 Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending,** hooking, placing in position, lapping and or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. MORTH Specification No 1600 & 2200 TMT Bars Fe 500 Page No 229 I. No 28.8.2 SR 18-19	**Tn**							
	for RCC drain 60 kg/cum		0.060	**489.60**			29.38		
	for RCC culvert 90 kg/cum		0.090	**23.56**			2.12		
				513.16			**31.50**	**72326.98**	**2278053.00**
	Basic Rate	68233.00							
	Area Weightage 6%	4093.98							
	Grand Total	72326.98							
6	**Providing and Fixing pre cast covering Slab made out of CC 1:2:4 with 10cm thick and** Finishing cutting , including form work, cost of alll materials, labour,hire charges of chinery,loading ,unloading ,lead and lift, transportation etc copmplete. (Data Rate)	**Sqm**							
	Lake view layout 2nd main road balance RCC drain		1	180.00	0.90		162.00		
	lake view layout 3rd main road		2	316.00	0.90		568.80		
	1st cross road (3rd main road)		2	37.00	0.90		66.60		
	1st cross road (4th main road)		2	37.00	0.90		66.60		
	RHS main road 2nd cross LHS		2	30.00	0.90		54.00		
	RHS main road 2nd cross RHS		2	150.00	0.90		270.00		
	Cross road		1	40.00	0.90		36.00		
							1224.00	**2337.00**	**2860488.00**
	Date Rate	**2337.00**							

7	**Providing and Fixing pre cast covering Slab 250mm thick made out of CC 1:2:4** and jelly 20mm Down size with steel reinforcement including form work,curing,including cost of alll materials, labour,hire charges of machinery, loading, unloading, lead and lift,transportation etc ,complete.As per Engineer incharge. (Data Rate)	**Sqm**							
	for culverts								
	Lake view layout 1st cross road LHS		3	7.00	1.20		25.20		
	RHS main road 1st cross LHS		1	6.00	1.20		7.20		
	RHS main road 2nd cross RHS		1	6.00	1.20		7.20		
							39.60	**5418.00**	**214553.00**
	Date Rate	**5418.00**							
8	**Providing and fixing pre cast solid cement concrete kerb stones made out of C.C. 1:2:4 with top and bottom width 114 and 165** mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting, including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc., complete. Page No.27. Item No.5.30	Nos							
	Lake view layout 2nd main road balance RCC drain		2	250.00			500.00		
	1st cross road (3rd main road)		2	37.00			74.00		
	1st cross road (4th main road)		2	37.00			74.00		
	RHS main road 1st cross LHS		2	30.00			60.00		
	RHS main road 2nd cross RHS		2	150.00			300.00		
							1008.00		
					0.45		2240.00		
							2240.00	**432.600**	**969024.00**
	Basic Rate	408.00							
	Area Weightage 6%	24.48							
	Grand Total	432.600							
9	KSRRB 800-1. Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8 Page No.180. Item No.24.1	sqm							
	Lake view layout main road		2	250.00	0.45		225.00		
	1st cross road (3rd main road)		2	37.00	0.45		33.30		
	1st cross road (4th main road)		2	37.00	0.45		33.30		
	RHS main road 1st cross LHS		2	30.00	0.45		27.00		

			2	150.00	0.45		135.00		
	RHS main road 2nd cross RHS						**453.60**	**84.80**	**38465.00**
	Basic Rate	80.00							
	Area Weightage 6%	4.80							
	Grand Total	84.80							
	for CC road								
10	**KSRRB M600-1. Construction of dry lean cement concrete mix CC 1:5:10 with OPC cement @160Kgs, with 25mm and down size graded granite metal coarse aggregate at 0.86cum and fine aggregates @ 0.58cum Sub- base over a prepared sub-grade with (coarse and fine aggregate conforming to IS: 383) aggregate cement ratio not to exceed 15:1.** Aggregate gradation after blending to be as per Table 600-1, cement content not to be less than 160 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver with electronic sensor, compacting with 8-10 tonnes vibratory roller, finishing and curing complete as per specifications. MORTH Specification No. 601 of MORTH V Revision and IS 456 Table-5 22.1.1 -do- with OPC at 150 kg/cum and coarse aggregate 0.86cum, fine aggregate 0.58cum using Concrete Batch mix Plant at 75 cum/hr capacity with Slip form paver with electronic sensor Page No.174. Item No.22.1.1	**Cum**							
	for CC road								
	RHS main road 2nd cross RHS		1	20.00	6.00	0.15	18.00		
	ain road 3rd cross RHS		1	20.00	6.00	0.15	18.00		
	ain road 2nd cross RHS		1	20.00	6.00	0.15	18.00		
	main road 4th cross RHS		1	20.00	6.00	0.15	18.00		
							72.00	**3800.10**	**273607.00**
	Basic Rate	3585.00							
	Area Weightage 6%	215.10							
	Grand Total	3800.10							

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11	Constructing un-reinforced, plain cement concrete for pavements using Grade concrete M30 over a prepared base with OPC coarse aggregate at 0.69 cum, fine aggregates at 0.46 cum,Coarse and fine aggregate conforming to 18:383-2016, with Superplastizer at 3 lts conforming to IS 9103-2008, mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing), & Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished with floaters in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, including groove cutting charges, joint filler, separation membrane of impermiable plastic sheet of 125 micron, sealant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades, textured with texturing machine, and curing including cost of all materials, labour,hire charges of machineries,all lead & lift charges etc.,	Cum							
	for CC road								
	RHS main road 2nd cross RHS		1	20.00	6.00	0.125	15.00		
	RHS main road 3rd cross RHS		1	20.00	6.00	0.125	15.00		
	RHS main road 2nd cross RHS		1	20.00	6.00	0.125	15.00		
	RHS main road 4th cross RHS		1	20.00	6.00	0.125	15.00		
							60.00	**5210.96**	**312658.00**
	Basic Rate	4916.00							
	Area Weightage 6%	294.96							
	Grand Total	5210.96							
	for Asphalt road								
12	**Construction of granular sub-base Grading-V as Sub-base and drainage layer by providing** coarse graded crushed stone aggregates of granite/trap/basalt material, mixing by mix in place method byrotavator at OMC, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications. Clause 401 of MORTH V Revision. Page No.153. Item No.20.6	**cum**							
	for road								
	Lake view layout main road		1	475.00	7.00	0.15	498.75		
	Lake view layout 1st cross road LHS		1	37.00	7.00	0.15	38.85		
							537.60	**1855.00**	**997248.00**
	Basic Rate	1750.00							
	Area Weightage 6%	105.00							
	Grand Total	1855.00							

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13	**KSRRB M400-17. Providing, laying, spreading and compacting crushed stone aggregates of granite / trap / basalt to wet mix** macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications. MORTH Specification No. 406. Page No. 155. Item No.20.18	**cum**							
	Lake view layout main road		1	475.00	7.00	0.15	498.75		
	Lake view layout 1st cross road LHS		1	37.00	7.00	0.15	38.85		
							537.60	**2001.28**	**1075888.00**
	Basic Rate	1888.00							
	Area Weightage 6%	113.28							
	Grand Total	2001.28							
14	**KSRRB M500-6. Providing and applying primer coat with S.S. bitumen emulsion** on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications Clause 502 of MORTH V revision(P.No-158,I No-21.6)	**sqm**							
	Lake view layout main road		1	475.00	7.00		3325.00		
	Lake view layout 1st cross road LHS		1	37.00	7.00		259.00		
							3584.00	33.92	**121569.00**
	Basic Rate	32.00							
	Area Weightage 6%	1.92							
	Grand Total	33.92							

16	**KSRRB M500-17. Providing and laying Dense Graded Bituminous Macadam using crushed aggregates of specified grading,** premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10 complete in all respects complete as per specifications. MORTH Specification No. 507. Using 100/120 TPH capacity HMP with sensor paver Gr-II (50 mm to 75mm) with 4.5% VG-30 Bitumen. Page No.160. Item No.21.17.2	**Cum**							
	for camber correction only								
	Lake view layout main road		1	475.00	3.00	0.05	71.25		
	Lake view layout 1st cross road LHS		1	37.00	2.50	0.05	4.63		
							75.88	**7620.34**	**578193.00**
	Basic Rate	7189.00							
	Area Weightage 6%	431.34							
	Grand Total	7620.34							
17	KSRRB 500-7. **Providing and applying tack coat using 80/100 grade bitumen (VG10) on the** prepared black topped surfaces at 0.25 kg per sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Chapter 5 Page No.158. Item No.21.7	**Sqm**							
	Lake view layout main road		1	475.00	7.00		3325.00		
	Lake view layout 1st cross road LHS		1	37.00	7.00		259.00		
							3584.00	**12.72**	**45588.00**
	Basic Rate	12.00							
	Area Weightage 6%	0.72							
	Grand Total	12.72							

18	**Providing and laying bituminous concrete 40mm thick with hot mix plant, using crushed aggregates of specified grading, premixed with** bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. Clause 507 of MORTH V revision as per IRC SP-53-2015.do- using 40-60 TPH capacity HMP with mechanical paver grading II (30-45mm) with 5.4% of modified bituminous binder consisting of 4.97% ofVG-30 bitumen (60/70 grade} and 0.43% of plastomeric thermoplastics (waste plastic) Page No. 171. Item No.21.78.12	**Cum**							
	Lake view layout main road		1	475.00	7.00	0.04	133.00		
	Lake view layout 1st cross road LHS		1	37.00	7.00	0.04	10.36		
							143.36	**8699.42**	**1247149.00**
	Basic Rate	8207.00							
	Area Weightage 6%	492.42							
	Grand Total	8699.42							
19	**Providing and fixing of retro - reflectorised cautionary, mandatory and informatory sign as per IRC:67 made of high intensity grade sheeting vide Clause** 801.3, fixed over aluminium sheeting, 1.5 mm thick supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M 15 grade cement concrete 45 em x 45 cm x 60 em, 60 cm below ground level as per approved drawing Page No.180. Item No.24.2	**Nos**							
	Lake view layout main road		2	238.00			476.00		
	Lake view layout 1st cross road LHS		2	19.00			38.00		
							514.00	**137.80**	**70829.00**
	Basic Rate	130.00							
	Area Weightage 6%	7.80							
	Grand Total	137.80							

20	**KSRRB M800-4. Direction and Place Identification Signs / Project Information Board with size more than 0.9 sqm Size Board:- Providing** and erecting direction and place identification retro-reflectorised sign as per IRC:67 made of high intensity grade sheeting vide Clause 801.3, fixed over aluminium sheeting, 2 mm thick with area not exceeding 0.9 sqm supported on a mild steel single angle iron post 75 x 75 x 6 mm , 2 Nos. firmly fixed to the ground by means of properly designed foundation with M 15 grade cement concrete 45 x 45 x 60 em, 60 em below ground level as per approved drawing. Page No.180. Item No.24.4	Nos							
			2	1.00			2.00		
							2.00	**7567.34**	**15135.00**
	Basic Rate	7139.00							
	Area Weightage 6%	428.34							
	Grand Total	7567.34							
21	**KSRRB M800-13. Road Marking with Hot Applied 'Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface:-** Providing and laying of hot applied thermoplastic ...mpound 2.5 mm thick including ...lectorising glass beads at 250 ...ns per sqm area, thickness of ....5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes ...omplete as per spe... ...s. MORTH Specification N... Page No.182. Item	Sqm							
	...iew layout main road		1	475.00	0.10		47.50		
			2	475.00	0.15		142.50		
	...e view layout 1st cross road ...HS		1	37.00	0.10		3.70		
			2	37.00	0.15		11.10		
							204.80	**454.74**	**93131.00**
	Basic Rate	429.00							
	Area Weightage 6%	25.74							
	Grand Total	454.74							
23	for Rain water harvesting work including 40mm jelly, 20mm jelly coarse sand, fine sand, 12.50 mm chips as per data rates	Nos	3				3	20882.00	62646.00

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	Total construction cost	16784792.00
	GST 12%	2014175.04
	DPR & PMC 2%	335695.84
	Tender premium 5%	839239.60
10	Miscellaneous charges	26097.07
	Total	20000000.00

(Rupees Two Crore Only)

CERTIFICATE

1 The work spot has been inspected and the work is found necessary.
2 This estimate is prepared as per C.S.R. of 2018-19
3 The provisions were made in this estimate are necessary and adequate.
4 This works come under B.B.M.P. limits.

Assistant Engineer

Assistant Executive Engineer
Yelahanka Sub Division
Bangalore-64

Executive Engineer
Yelahanka Division
Bangalore-64

BRUHAT BANGALORE MAHANAGARA PALIKE

YELAHANKA ZONE

Estimate Cost Rs. 10000000.00

Name of Work: Improvements to balance road and drain at lake view layout balance cross roads in kempegowda ward no -01 of yelahanka Sub division.

Sl No	Description of Item	Unit	No	L	B	D	Qty	Rate	Amount
1	KSRRB M300-14. Excavation for roadwork in all types of soil by mechanical means including cutting and loading to tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transportation with a lead of 1.00 km and complete as per specifications. MORTH Specification No.301 Page No.143. Item No.19.14	cum							
	for CC road								
	RHS main road 5th cross road		1	20.00	6.00	0.20	24.00		
	for Asphalt road								
	LHS main road 4th cross road		1	120.00	6.00	0.30	216.00		
	LHS main road 5th cross road		1	90.00	6.00	0.30	162.00		
	LHS main road 6th cross road		1	140.00	6.00	0.30	252.00		
	LHS main road 7th cross road		1	90.00	6.00	0.30	162.00		
	Lake view layout Cross road		1	150.00	6.00	0.30	270.00		
							1086.00	125.59	136389.00
	Basic Rate	41.00							
	Area Weightage 6%	2.46							
	Grand Total	43.46							
	Loading and unloading + Basic Rate for Haulage upto 8.00 k.m =(1.28 X 2.50 X 8)+ 57	77.48							
	Area Weightage 6%	4.65							
		125.59							
2	KSRB 2-2.1 : Earthwork excavation by manual means for foundation of buildings, culverts, water supply and sanitary lines and electrical conduits etc, either in pits or in trenches 1.5m and above in width, in ordinary soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. including breaking of clods complete as per specifications. No. KBS 2.1 (a) I 2.3.5 page no 6	cum							
	for RCC drain								
	LHS main road 3nd cross		2	125.00	1.00	1.00	250.00		
	LHS main road 6th cross		1	140.00	1.00	1.00	140.00		
	LHS main road 7th cross		1	60.00	1.00	1.00	60.00		
	for kerb								

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	LHS main road 3rd cross		2	125.00	0.165	0.25	10.31		
	LHS main road 6th cross		1	140.00	0.165	0.25	5.78		
							466.09	**399.07**	**186001.00**
	Basic Rate	299.00							
	Area Weightage 6%	17.94							
	Grand Total	316.94							
	Loading and unloading + Basic Rate for Haulage upto 8.00 k.m =(1.28 X 2.50 X 8)+ 57	77.48							
	Area Weightage 6%	4.65							
		399.07							
3	KSRB 4-1.7 : **Providing and laying in position plain cement concrete of Mix 1:3:6 with OPC @ 220kgs, with 20mm and down size graded granite metal coarse aggregates @0.69 cum** and fine aggregtes @ 0.56cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2 Page No.13 Item No.4.7	cum							
	for RCC drain								
	LHS main road 3nd cross		2	125.00	1.00	0.15	37.50		
	LHS main road 6th cross		1	140.00	1.00	0.15	21.00		
	LHS main road 7th cross		1	60.00	1.00	0.15	9.00		
	for kerb								
	LHS main road 3rd cross		2	125.00	0.165	0.10	4.13		
	LHS main road 6th cross		1	140.00	0.165	0.10	2.31		
							73.94	**5627.54**	**416072.00**
	Basic Rate	5309.00							
	Area Weightage 6%	318.54							
	Grand Total	5627.54							
4	Providing and laying **plain/reinforced cement concrete for side drains using M20 nominal mix concrete with OPC at 300 kgs**. with 20mm and down size granite metal coarse aggregates at 0.69 cum and fine aggregates at 0.43 cum machine mixed, well compacted for walls and bottom including centering, shuttering, cost of materials, HOM of machinery, curing etc., complete excluding cost of steel as per MORTH specification No. 1500, 1700, 2200. including cost of materials, labour, HOM complete as per specifications. Page No.270. Item No.37.59.1	cum							

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	for bed								
	LHS main road 3nd cross		2	125.00	0.90	0.15	33.75		
	LHS main road 6th cross		1	140.00	0.90	0.15	18.90		
	LHS main road 7th cross		1	60.00	0.90	0.15	8.10		
	for side walls								
	LHS main road 3nd cross	2x2	4	125.00	0.15	0.75	56.25		
	LHS main road 6th cross		2	140.00	0.15	0.75	31.50		
	LHS main road 7th cross		2	60.00	0.15	0.75	13.50		
							162.00	**7273.72**	**1178343.00**
	Basic Rate	6862.00							
	Area Weightage 6%	411.72							
	Grand Total	7273.72							
5	KSRRB M 2200-6 **Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking,** placing in position, lapping and or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. MORTH Specification No 1600 & 2200 TMT Bars Fe 500 Page No 229 I. No 28.8.2 SR 18-19	**Tn**							
	for RCC drain 60 kg/cum		0.060	**162.00**			9.72		
				162.00			**9.72**	**72326.98**	**703018.00**
	Basic Rate	68233.00							
	Area Weightage 6%	4093.98							
	Grand Total	72326.98							
6	**Providing and Fixing pre cast covering Slab made out of CC 1:2:4 with 10cm thick and** Finishing cutting , including form work, cost of alll materials, labour,hire charges of chinery,loading ,unloading ,lead and lift, transportation etc copmplete. (Data Rate)	**Sqm**							
	LHS main road 3rd cross		2	125.00	0.90		225.00		
	LHS main road 6th cross		1	140.00	0.90		126.00		
	LHS main road 7th cross		1	60.00	0.90		54.00		
							405.00	**2337.00**	**946485.00**
	Date Rate	**2337.00**							

7	**Providing and fixing pre cast solid cement concrete kerb stones made out of C.C. 1:2:4 with top and bottom width 114 and 165 mm respectively,** 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting, including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc., complete. Page No.27. Item No.5.30	Nos							
	LHS main road 3rd cross		2	125.00			250.00		
	LHS main road 6th cross		1	140.00			140.00		
					0.45		866.67		
							865.00	**432.600**	**374199.00**
	Basic Rate	408.00							
	Area Weightage 6%	24.48							
	Grand Total	432.600							
8	KSRRB 800-1. Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8 Page No.180. Item No.24.1	**sqm**							
	LHS main road 3rd cross		2	125.00	0.45		112.50		
	LHS main road 6th cross		1	140.00	0.45		63.00		
							175.50	**84.80**	**14882.00**
	Basic Rate	80.00							
	Area Weightage 6%	4.80							
	Grand Total	84.80							
	for CC road								

9	KSRRB M600-1. Construction of dry lean cement concrete mix CC 1:5:10 with OPC cement @160Kgs, with 25mm and down size graded granite metal coarse aggregate at 0.86cum and fine aggregates @ 0.58cum Sub- base over a prepared sub-grade with (coarse and fine aggregate conforming to IS: 383) aggregate cement ratio not to exceed 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content not to be less than 160 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver with electronic sensor, compacting with 8-10 tonnes vibratory roller, finishing and curing complete as per specifications. MORTH Specification No. 601 of MORTH V Revision and IS 456 Table 5 22.1.1 -do- with OPC at 150 kg/cum and coarse aggregate 0.86cum, fine aggregate 0.58cum using Concrete Batch mix Plant at 75 cum/hr capacity with Slip form paver with electronic sensor Page No.174. Item No.22.1.1	Cum							
	for CC road								
	LHS main road 5th cross road		1	20.00	6.00	0.15	18.00		
							18.00	**3800.10**	**68402.00**
	Basic Rate	3585.00							
	Area Weightage 6%	215.10							
	Grand Total	3800.10							
10	**Constructing un-reinforced, plain cement concrete for pavements using Grade concrete M30 over a prepared base with OPC coarse aggregate at 0.69 cum, fine aggregates at 0.46 cum,Coarse and fine** aggregate conforming to IS:383-2016, with Superplastizer at 3 lts conforming to IS 9103-2008. mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). & Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished with floaters in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, including groove cutting charges, joint filler, separation membrane of impermiable plastic sheet of 125 micron, sealant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades, textured with texturing machine, and curing including cost of all materials, labour,hire charges of machineries,all lead & lift charges etc., complete as per specifications. do-with OPC at 360 kg/cum and coarse aggregate 0.69cum. fine aggregate 0.46cum. Page No.176. Item No.22.6.1	Cum							
	for CC road								
	LHS main road 5th cross road		1	20.00	6.00	0.150	18.00		
							18.00	**5210.96**	**93797.00**
	Basic Rate	4916.00							
	Area Weightage 6%	294.96							

	Grand Total	5210.96							
	for Asphalt road								
11	**Construction of granular sub-base Grading-V as Sub-base and drainage layer by providing** coarse graded crushed stone aggregates of granite/trap/basalt material, mixing by mix in place method byrotavator at OMC, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications. Clause 401 of MORTH V Revision. Page No.153. Item No.20.6	cum							
	for road								
	LHS main road 4th cross road		1	120.00	6.00	0.15	108.00		
	LHS main road 5th cross road		1	90.00	6.00	0.15	81.00		
	LHS main road 6th cross road		1	140.00	6.00	0.15	126.00		
	LHS main road 7th cross road		1	90.00	6.00	0.15	81.00		
	lake view layout 3rd main road		1	150.00	6.00	0.15	135.00		
							531.00	**1855.00**	**985005.00**
	Basic Rate	1750.00							
	Area Weightage 6%	105.00							
	Grand Total	1855.00							
12	KSRRB M400-17. **Providing, laying, spreading and compacting crushed stone aggregates of granite / trap / basalt to wet mix macadam** specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications. MORTH Specification No. 406. Page No. 155. Item No.20.18	cum							
	LHS main road 4th cross road		1	120.00	6.00	0.15	108.00		
	LHS main road 5th cross road		1	90.00	6.00	0.15	81.00		
	LHS main road 6th cross road		1	140.00	6.00	0.15	126.00		
	LHS main road 7th cross road		1	90.00	6.00	0.15	81.00		
	lake view layout 3rd main road		1	150.00	6.00	0.15	135.00		
							531.00	**2001.28**	**1062680.00**
	Basic Rate	1888.00							
	Area Weightage 6%	113.28							
	Grand Total	2001.28							

Sl.	Description	Unit	Nos	L	B	D	Qty	Rate	Amount
13	**KSRRB M500-6. Providing and applying primer coat with S.S. bitumen emulsion** on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications Clause 502 of MORTH V revision(P.No-158,I No-21.6)	sqm							
	LHS main road 4th cross road		1	120.00	6.00		720.00		
	LHS main road 5th cross road		1	90.00	6.00		540.00		
	LHS main road 6th cross road		1	140.00	6.00		840.00		
	LHS main road 7th cross road		1	90.00	6.00		540.00		
	lake veiw layout 3rd main road		1	150.00	6.00		900.00		
							3540.00	**33.92**	**120077.00**
	Basic Rate	32.00							
	Area Weightage 6%	1.92							
	Grand Total	33.92							
14	**KSRRB M500-17. Providing and laying Dense Graded Bituminous Macadam using crushed aggregates of specified grading,** premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10 complete in all respects complete as per specifications. MORTH Specification No. 507. Using 100/120 TPH capacity HMP with sensor paver Gr-II (50 mm to 75mm) with 4.5% VG-30 Bitumen. Page No.160. Item No.21.17.2	Cum							
	for camber correction								
	LHS main road 4th cross road		1	120.00	3.00	0.05	18.00		
	LHS main road 5th cross road		1	90.00	3.00	0.05	13.50		
	LHS main road 6th cross road		1	140.00	3.00	0.05	21.00		
	LHS main road 7th cross road		1	90.00	3.00	0.05	13.50		
	lake veiw layout 3rd main road		1	150.00	3.00	0.05	22.50		
							88.50	**7620.34**	**674400.00**
	Basic Rate	7189.00							
	Area Weightage 6%	431.34							
	Grand Total	7620.34							
15	KSRRB 500-7. **Providing and applying tack coat using 80/100 grade bitumen (VG10) on the** prepared black topped surfaces at 0.25 kg per sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Chapter 5 Page No.158. Item No.21.7	Sqm							
	LHS main road 4th cross road		1	120.00	6.00		720.00		

	LHS main road 5th cross road		1	90.00	6.00		540.00		
	LHS main road 6th cross road		1	140.00	6.00		840.00		
	LHS main road 7th cross road		1	90.00	6.00		540.00		
	lake view layout 3rd main road		1	150.00	6.00		900.00		
							3540.00	**12.72**	**45029.00**
	Basic Rate	12.00							
	Area Weightage 6%	0.72							
	Grand Total	12.72							
16	**Providing and laying bituminous concrete 40mm thick with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder** and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. Clause 507 of MORTH V revision as per IRC SP- 53-2015.do using 40-60 TPH capacity HMP with mechanical paver grading II (30-45mm) with 5.4% of modified bituminous binder consisting of 4.97% ofVG-30 bitumen (60/70 grade) and 0.43% of plastomeric thermoplastics (waste plastic) Page No. 171. Item No.21.78.12	**Cum**							
	LHS main road 4th cross road		1	120.00	6.00	0.04	28.80		
	LHS main road 5th cross road		1	90.00	6.00	0.04	21.60		
	LHS main road 6th cross road		1	140.00	6.00	0.04	33.60		
	LHS main road 7th cross road		1	90.00	6.00	0.04	21.60		
	lake veiw layout 3rd main road		1	150.00	6.00	0.04	36.00		
							141.60	**8699.42**	**1231838.00**
	Basic Rate	8207.00							
	Area Weightage 6%	492.42							
	Grand Total	8699.42							
17	**Providing and fixing of retro - reflectorised cautionary, mandatory and informatory sign as per IRC:67 made of high intensity grade sheeting vide Clause** 801.3, fixed over aluminium sheeting, 1.5 mm thick supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M 15 grade cement concrete 45 em x 45 cm x 60 em, 60 cm below ground level as per approved drawing Page No.180. Item No.24.2	**Nos**							
	LHS main road 4th cross road		2	60.00			120.00		
	LHS main road 5th cross road		2	45.00			90.00		
	LHS main road 6th cross road		2	70.00			140.00		
	LHS main road 7th cross road		2	45.00			90.00		
	lake veiw layout 3rd main road		2	75.00			150.00		
							590.00	**137.80**	**81302.00**
	Basic Rate	130.00							
	Area Weightage 6%	7.80							
	Grand Total	137.80							

18	**KSRRB M800-4. Direction and Place Identification Signs / Project Information Board with size more than 0.9 sqm Size Board:-Providing** and erecting direction and place identification retro- reflectorised sign as per IRC:67 made of high intensity grade sheeting vide Clause 801.3, fixed over aluminium sheeting, 2 mm thick with area not exceeding 0.9 sqm supported on a mild steel single angle iron post 75 x 75 x 6 mm , 2 Nos. firmly fixed to the ground by means of properly designed foundation with M 15 grade cement concrete 45 x 45 x 60 em, 60 em below ground level as per approved drawing. Page No.180. Item No.24.4	Nos							
			1	1.00			1.00		
							1.00	**7567.34**	**7567.00**
	Basic Rate	7139.00							
	Area Weightage 6%	428.34							
	Grand Total	7567.34							
19	**KSRRB M800-13. Road Marking with Hot Applied 'Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface:-** Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803 Page No.182. Item No.24.15	Sqm							
	LHS main road 4th cross road		1	80.00	0.10		8.00		
			2	120.00	0.15		36.00		
	LHS main road 5th cross road		1	60.00	0.10		6.00		
			2	90.00	0.15		27.00		
	LHS main road 6th cross road		1	93.33	0.10		9.33		
			2	140.00	0.15		42.00		
	LHS main road 7th cross road		1	60.00	0.10		6.00		
			2	90.00	0.15		27.00		
	lake view layout 3rd main road		1	100.00	0.10		10.00		
			2	150.00	0.15		45.00		
							216.33	**454.74**	**98375.00**
	Basic Rate	429.00							
	Area Weightage 6%	25.74							
	Grand Total	454.74							

20	for Rain water harvesting work including 40mm jelly, 20mm jelly coarse sand, fine sand, 12.50 mm chips as per data rates	Nos	2				2	20882.00	41764.00
					Total construction cost				8465626.00
					GST 12%				1015875.12
					DPR 1%				84656.26
					Tender premium 5%				423281.30
									10561.32
21	Miscellaneous charges							Total	10000000.00
	(Rupees One Crore Only)								

CERTIFICATE

1. The work spot has been inspected and the work is found necessary.
2. This estimate is prepared as per C.S.R. of 2018-19
3. The provisions were made in this estimate are necessary and adequate.
4. This works come under B.B.M.P. limits.

Assistant Engineer

Assistant Executive Engineer
Yelahanka Sub Division
Bangalore-64

Executive Engineer
Yelahanka Division
Bangalore-64

BRUHAT BANGALORE MAHANAGARA PALIKE

YELAHANKA ZONE

Estimate Cost Rs. 20000000.00

Name of Work: Asphalting to roads at Govt Hospital road via BBMP office upto masidi circle in kempegowda ward no-01 of yelahanka Sub division

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
1	KSRRB M300-14. Excavation for roadwork in all types of soil by mechanical means including cutting and loading to tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transportation with a lead of 1.00 km and complete as per specifications. MORTH Specification No.301 Page No.143. Item No.19.14	cum							
	for asphalt road								
	Sumathi juwellers LHS cross road		1	50.00	7.00	0.30	105.00		
							105.00	125.59	13187.00
	Basic Rate	41.00							
	Area Weightage 6%	2.46							
	Grand Total	43.46							
	Loading and unloading + Basic Rate for Haulage upto 8.00 k.m =(1.28 X 2.50 X 8)+ 57	77.48							
	Area Weightage 6%	4.65							
		125.59							
2	KSRB 2-2.1 : Earthwork excavation by manual means for foundation of buildings, culverts, water supply and sanitary lines and electrical conduits etc, either in pits or in trenches 1.5m and above in width, in ordinary soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. Including breaking of clods complete as per specifications. No. KBS 2.1 (a) I 2.3.5 page no 6	cum							
	for RCC drain								
	for all cross road approche drains		10	47.00	0.90	0.90	380.70		
	SBI to mahalaxmi textile road		2	124.00	1.20	1.20	357.12		
	SBI cross road		2	58.00	0.90	0.90	93.96		
	for culverts								
	Near Govt hospital road LHS		6	8.00	1.65	1.20	95.04		
	Near Govt hospital road RHS		6	7.00	1.65	1.20	83.16		
	for kerb								
	SBI to mahalaxmi textile road		2	124.00	0.165	0.15	6.14		
							1016.12	399.07	405501.00
	Basic Rate	299.00							
	Area Weightage 6%	17.94							
	Grand Total	316.94							
	Loading and unloading + Basic Rate for Haulage upto 8.00 k.m =(1.28 X 2.50 X 8)+ 57	77.48							
	Area Weightage 6%	4.65							
		399.07							
3	Removing &refixing stone slab of drain	sqm							
	Sumati jwellars		1	70.00	0.90		63.00		
	Chetan clinic opp. Road		1	95.00	0.90		85.50		
							148.50		
							37.13	1062.12	39431
	Taking avilable slabs 25%	basic rate	897						
	Add single line dressing for available stone	basic rate	105						
	Removing &refixing stone slab of drain								
	Basic Rate	1002.00							
	Area Weightage 6%	60.12							
	Grand Total	1062.12							

4	**Providing granite slabs of selected quality roughly fressed and fixed in cement mortar (1:6) including fixing curing etc., complete - do- 10 cms thick (pagNo27. lno 5.31.2.)**								
	Take 25% new								
		basic rate	912						
	KSRB 5-8.2: Providing two line dressing to granite stone slab/ granite stone masonry as per specifications.(pagNo26. lno 5.18.)	**basic rate**	1495				148.50		
	Basic Rate	2407.00	QTY Vide item no 3					**2551.42**	**284164.40**
	Area Weightage 6%	144.42	takeing 75% new stone				**111.38**		
	Grand Total	**2551.42**							
5	KSRB M300-19 Removal of unserviceable soil including excavation, loading and disposal but excluding replacement by suitable soil which shall be paid separately as per clause 300.5 complete as per specification no 301 pag no 147 lt no 19.62								
	Desilting								
	Sumati jwellars		1	70.00	0.60	0.45	18.90		
	Chetan clinic opp. Road		1	95.00	0.90	0.45	38.48		
							57.38	**36.04**	**2068**
	Basic Rate	34.00							
	Area Weightage 6%	2.04							
	Grand Total	**36.04**							
6	**KSRB 4-1.7 : Providing and laying in position plain cement concrete of Mix 1:3:6 with OPC @ 220kgs, with 20mm and down size graded granite metal coarse aggregates @0.69 cum** and fine aggregtes @ 0.56cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2 Page No.13 Item No.4.7	cum							
	for RCC drain								
	for all cross road approche drains		10	47.00	0.90	0.15	63.45		
	SBI to mahalaxmi textile road		2	124.00	1.20	0.15	44.64		
	SBI cross road		2	58.00	0.90	0.15	15.66		
	for culverts								
	Near Govt hospital road LHS		6	8.00	1.50	0.15	10.80		
	Near Govt hospital road RHS		6	7.00	1.50	0.15	9.45		
	for kerb								
	SBI to mahalaxmi textile road		2	124.00	0.165	0.10	4.09		
							148.09	**5627.54**	**833394.00**
	Basic Rate	5309.00							
	Area Weightage 6%	318.54							
	Grand Total	5627.54							
7	**Providing and laying plain/reinforced cement concrete for side drains using M20 nominal mix concrete with OPC at 300 kgs.** with 20mm and down size granite metal coarse aggregates at 0.69 cum and fine aggregates at 0.43 cum machine mixed, well compacted for walls and bottom including centering, shuttering, cost of materials, HOM of machinery, curing etc., complete excluding cost of steel as per MORTH specification No. 1500, 1700, 2200. including cost of materials, labour, HOM complete as per specifications. Page No.270. Item No.37.59.1	cum							
	for bed								
	for RCC drain								

	for RCC drain		10	47.00	0.90	0.15	63.45		
	for all cross road approche drains		2	124.00	1.00	0.15	37.20		
	SBI to mahalaxmi textile road		2	58.00	0.90	0.15	15.66		
	SBI cross road								
	for culverts		6	8.00	1.20	0.25	14.40		
	Near Govt hospital road LHS		6	7.00	1.20	0.25	12.60	27.00	
	Near Govt hospital road RHS								
	for side walls								
	for RCC drain		20	47.00	0.15	0.75	105.75		
	for all cross road approche drains		4	124.00	0.15	0.90	66.96		
	SBI to mahalaxmi textile road		4	58.00	0.15	0.75	26.10		
	SBI cross road								
	for culverts		12	8.00	0.23	0.90	19.87		
	Near Govt hospital road LHS		12	7.00	0.23	0.90	17.39	37.26	
	Near Govt hospital road RHS						379.38	7273.72	2759504.00
	Basic Rate	6862.00							
	Area Weightage 6%	411.72							
	Grand Total	7273.72							
8	**KSRRB M 2200-6 Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications.** Specification No. MORTH Specification No 1600 & 2200 TMT Bars Fe 500 Page No 229 I. No 28.8.2 SR 18-19	Tn							
	for RCC drain 60 kg/cum		0.060	315.12			18.91		
	for RCC culvert 90 kg/cum		0.090	64.26			5.78		
				379.38			24.69	72326.98	1785797.00
	Basic Rate	68233.00							
	Area Weightage 6%	4093.98							
	Grand Total	72326.98							
9	**Providing and Fixing pre cast covering Slab made out of CC 1:2:4 with 10cm thick and** Finishing cutting , including form work, cost of alll materials, labour,hire charges of chinery,loading ,unloading ,lead and lift, transportation etc ,copmplete. (Data Rate)	Sqm							
	for RCC drain								
	for all cross road approche drains		10	47.00	0.90		423.00		
	SBI to mahalaxmi textile road		2	124.00	0.90		223.20		
	SBI cross road		2	58.00	0.90		104.40		
							750.60	2337.00	1754152.00
	Date Rate	2337.00							
10	**Providing and Fixing pre cast covering Slab 250mm thick made out of CC 1:2:4** and jelly 20mm Down size with steel reinforcement including form work,curing,including cost of alll materials, labour,hire charges of machinery, loading, unloading, lead and lift,transportation etc ,complete.As per Engineer incharge. (Data Rate)	Sqm							
	for culverts								
	Near Govt hospital road LHS		6	8.00	1.20		57.60		
	Near Govt hospital road RHS		6	7.00	1.20		50.40		
							108.00	5418.00	585144.00

	Date Rate	5418.00								
11	Providing and fixing pre cast solid cement concrete kerb stones made out of C.C. 1:2:4 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting, including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc., complete. Page No.27. Item No.5.30	Nos								
	for kerb			2	95.00			190.00		
	Near Govt hospital road LHS							190.00		
						0.45		422.22		
								422.00	432.600	182557.00
	Basic Rate	408.00								
	Area Weightage 6%	24.48								
	Grand Total	432.600								
12	KSRRB 800-1. Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8 Page No.180. Item No.24.1	sqm								
	Near Govt hospital road LHS			2	95.00	0.450		85.50		
								85.50	84.80	7250.00
	Basic Rate	80.00								
	Area Weightage 6%	4.80								
	Grand Total	84.80								
	for Asphalt road									
13	**Construction of granular sub-base Grading V as Sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/trap/basalt material, mixing by mix in place method byrotavator at OMC, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications. Clause 401 of MORTH V Revision. Page No.153. Item No.20.6**	cum								
	for Asphalt road									
	Sumathi juwellers LHS cross road			1	50.00	7.00	0.15	52.50		
								52.50	1855.00	97388.00
	Basic Rate	1750.00								
	Area Weightage 6%	105.00								
	Grand Total	1855.00								
14	KSRRB M400-17. **Providing, laying, spreading and compacting crushed stone aggregates of granite / trap / basalt to wet mix macadam** specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications. MORTH Specification No. 406. Page No. 155. Item No.20.18	cum								
	for Asphalt road									
	Sumathi juwellers LHS cross road			1	50.00	7.00	0.15	52.50		
								52.50	2001.28	105067.00
	Basic Rate	1888.00								
	Area Weightage 6%	113.28								

	Grand Total	2001.28							
15	**KSRRB M500-6. Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications Clause 502 of MORTH V revision(P No-158 I No-21.6)**	sqm							
	for Asphalt road								
	Sumathi juwellers LHS cross road		1	50.00	7.00		350.00		
							350.00	33.92	**11872.00**
	Basic Rate	32.00							
	Area Weightage 6%	1.92							
	Grand Total	33.92							
16	KSRRB M500-2 cleaning the existing black topped surface with brooms, soft brushes and finallay dusting with old gunny bags and or compressed air to recived bituminous treatment including cost of all materials labour, HOM of machineries complete as per specification pwd sr 18-19 page no 158 it no 21.2	sq							
	for road								
	Govt hospital via BBMP main road		1	290.00	16.00		4640.00		
	sarrounding ashwatha katte		1	30.00	10.00		300.00		
	sarrounding ashwatha katte		1	30.00	16.00		480.00		
	sarrounding ashwatha katte		1	30.00	8.50		255.00		
	BTS bus stand to toward masidi	avg	1	350.00	6.50		2275.00		
							7950.00	5.62	**44663.10**
	Basic Rate	5.30							
	Area Weightage 6%	0.32							
	Grand Total	5.62							
17	**KSRRB 500-7. Providing and applying tack coat using 80/100 grade bitumen (VG10) on the prepared black topped surfaces at 0.25 kg** per sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Chapter 5 Page No.158. Item No.21.7	Sqm							
	for road								
	Over exisitng ground & over DBM								
	Govt hospital via BBMP main road		2	290.00	16.00		9280.00		
	sarrounding ashwatha katte		2	30.00	10.00		600.00		
	sarrounding ashwatha katte		2	30.00	16.00		960.00		
	sarrounding ashwatha katte		2	30.00	8.50		510.00		
	BTS bus stand to toward masidi	avg	2	350.00	6.50		4550.00		
	Sumathi juwellers LHS cross road		1	50.00	7.00		350.00		
							16250.00	**12.72**	**206700.00**
	Basic Rate	12.00							
	Area Weightage 6%	0.72							
	Grand Total	12.72							

18	**KSRRB M500-17. Providing and laying Dense Graded Bituminous Macadam using crushed aggregates of specified grading,** premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10 complete in all respects complete as per specifications. MORTH Specification No. 507. Using 100/120 TPH capacity HMP with sensor paver Gr-II (50 mm to 75mm) with 4.5% VG-30 Bitumen. Page No.160. Item No.21.17.2	Cum							
	Govt hospital via BBMP main road		1	290.00	16.00	0.05	232.00		
	sarrounding ashwatha katte		1	30.00	10.00	0.05	15.00		
	sarrounding ashwatha katte		1	30.00	16.00	0.05	24.00		
	sarrounding ashwatha katte		1	30.00	8.50	0.05	12.75		
	BTS bus stand to toward masidi	avg	1	350.00	6.50	0.050	113.75		
	Sumathi juwellers LHS cross road		1	50.00	7.00	0.05	17.50		
							415.00		
							41.50		
	For pot hole filling 10 % of the total Qty						**456.50**	**7620.34**	**3478685.00**
	Basic Rate	7189.00							
	Area Weightage 6%	431.34							
	Grand Total	7620.34							
19	**Providing and laying bituminous concrete 40mm thick with hot mix plant, using crushed aggregates of specified grading, premixed with** bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. Clause 507 of MORTH V revision as per IRC SP- 53-2015.do- using 40-60 TPH capacity HMP with mechanical paver grading II (30-45mm) with 5.4% of modified bituminous binder consisting of 4.97% ofVG-30 bitumen (60/70 grade) and 0.43% of plastomeric thermoplastics (waste plastic) Page No. 171. Item No.21.78.12	Cum							
	Govt hospital via BBMP main road		1	290.00	16.00	0.040	185.60		
	sarrounding ashwatha katte		1	30.00	10.00	0.040	12.00		
	sarrounding ashwatha katte		1	30.00	16.00	0.040	19.20		
	sarrounding ashwatha katte		1	30.00	8.50	0.040	10.20		
	BTS bus stand to toward masidi	avg	1	350.00	6.50	0.040	91.00		
	Sumathi juwellers LHS cross road		1	50.00	7.00	0.04	14.00		
							332.00	**8699.42**	**2888207.00**
	Basic Rate	8207.00							
	Area Weightage 6%	492.42							
	Grand Total	8699.42							
20	**Providing and fixing of retro - reflectorised cautionary, mandatory and informatory sign as per IRC:67 made of high intensity grade sheeting vide Clause 801.3,** fixed over aluminium sheeting, 1.5 mm thick supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M 15 grade cement concrete 45 em x 45 cm x 60 em, 60 cm below ground level as per approved drawing Page No.180. Item No.24.2	Nos							
	Govt hospital via BBMP main road		2	145.00			290.00		

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			2	15.00			30.00		
	sarrounding ashwatha katte		2	15.00			30.00		
	sarrounding ashwatha katte		2	15.00			30.00		
	sarrounding ashwatha katte	avg	2	175.00			350.00		
	BTS bus stand to toward masidi		2	25.00			50.00		
	Sumathi juwellers LHS cross road						780.00	137.80	107484.00
	Basic Rate	130.00							
	Area Weightage 6%	7.80							
	Grand Total	137.80							
21	**KSRRB M800-4. Direction and Place Identification Signs / Project Information Board with size more than 0.9 sqm Size Board:-Providing** and erecting direction and place identification retro- reflectorised sign as per IRC:67 made of high intensity grade sheeting vide Clause 801.3, fixed over aluminium sheeting, 2 mm thick with area not exceeding 0.9 sqm supported on a mild steel single angle iron post 75 x 75 x 6 mm , 2 Nos. firmly fixed to the ground by means of properly designed foundation with M 15 grade cement concrete 45 x 45 x 60 em, 60 em below ground level as per approved drawing. Page No.180. Item No.24.4	Nos							
			9	1.00			9.00		
							9.00	7567.34	68106.00
	Basic Rate	7139.00							
	Area Weightage 6%	428.34							
	Grand Total	7567.34							
22	**KSRRB M800-13. Road Marking with Hot Applied 'Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface:-** Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803 Page No.182. Item No.24.15	Sqm							
	Govt hospital via BBMP main road		1	193.33	0.10		19.33		
			2	290.00	0.15		87.00		
	sarrounding ashwatha katte		1	20.00	0.10		2.00		
			2	30.00	0.15		9.00		
	sarrounding ashwatha katte		1	20.00	0.10		2.00		
			2	30.00	0.15		9.00		
	sarrounding ashwatha katte		1	20.00	0.10		2.00		
			2	30.00	0.15		9.00		
	BTS bus stand to toward masidi	avg	1	233.33	0.10		23.33		
			2	350.00	0.15		105.00		
	Sumathi juwellers LHS cross road		1	33.33	0.10		3.33		
			2	50.00	0.15		15.00		
							286.00	454.74	130056.00
	Basic Rate	429.00							
	Area Weightage 6%	25.74							
	Grand Total	454.74							

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23	Fabricating, providing and erecting in position of Hot Dip Galvanised Gate Using 72X72X4.8mm Sq.GI Pipe frame with top pipe bending in heavy duty hydraulic press with sand packing and hot bending to from double arch as per drawing profile,20mm hot dip galavanised forged ornamental design in between shown in the drawing including providing hot dip galvanised forged ornamental designin between sq roads and heads at top, middle and bottom. intermediate supports of 75X12mm and 50X6mm arch bent to hot dip galvanised flats. the work is inclusive of throughing G.I flat GI sq roads placing ,welding all the joints including grinding, finishing metal patty, painting two coats enamel painting. the rate is inclusive of all materials like GI Sq roads, GI forged designs etc., heavy duty hinges are made out of 75mm solid sq. block assembled with 20mm dia bearing in three places for each flop. Heavy duty locking arrangements at low places including cost of labour, painting, erecting charges using hoist pulley cranes with all lead and lift, loading, transporttion, unloading, scaffolding charges and all other incidental charges for successful	sqm							
		2	10.00		3.40	68.00			
	For Grill					68.00		9144.00	621792.00
	Data Rate	9144.00							
24	for Rain water harvesting work including 40mm jelly, 20mm jelly coarse sand, fine sand, 12.50 mm chips as per data rates	Nos	18				18	20882.00	375876.00
								Total construction cost	16788045.50
								GST 12%	2014565.46
								DPR & PMC 2%	335760.91
								Tender premium 5%	839402.28
									22225.85
	Miscellaneous charges							Total	20000000.00

(Rupees Two Crore Only)

CERTIFICATE

1 The work spot has been inspected and the work is found necessary.
2 This estimate is prepared as per C.S.R. of 2018-19
3 The provisions were made in this estimate are necessary and adequate.
4 This works come under B.B.M.P. limits.

Assistant Engineer

Assistant Executive Engineer
Yelahanka Sub Division
Bangalore-64

Executive Engineer
Yelahanka Division
Bangalore-64

BRUHAT BANGALORE MAHANAGARA PALIKE									
YELAHANKA ZONE									
		Estimate Cost Rs.					20000000.00		
Name of Work: Detailed Estimate for the work of Improvements and Asphalting to roads and drains at GKVK Layout and surrounding areas in kempegowda ward no -01 of yelahanka Sub division.									
Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
	for RCC drain								
1	KSRB 2-2.1 : Earthwork excavation by manual means for foundation of buildings, culverts, water supply and sanitary lines and electrical conduits etc, either in pits or in trenches 1.5m and above in width, in ordinary soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. including breaking of clods complete as per specifications. No. KBS 2.1 (a) I 2.3.5 page no 6	cum							
	for RCC drain								
	GKVK Main Road Park side		2	190.00	0.90	0.90	307.80		
	1st cross road RHS		2	104.00	0.90	0.90	168.48		
	2nd Cross road RHS		2	104.00	0.90	0.90	168.48		
	LHS 1st cross road		2	27.00	0.90	0.90	43.74		
	LHS 2d cross road		2	27.00	0.90	0.90	43.74		
	3rd cross road LHS		2	100.00	0.90	0.90	162.00		
	for Culvert		8	8.00	1.65	1.20	126.72		
							1020.96	399.07	407433.00
	Basic Rate	299.00							
	Area Weightage 6%	17.94							
	Grand Total	316.94							
	Loading and unloading + Basic Rate for Haulage upto 8.00 k.m =(1.28 X 2.50 X 8)+ 57	77.48							
	Area Weightage 6%	4.65							
		399.07							
3	KSRB 4-1.7 : Providing and laying in position plain cement concrete of Mix 1:3:6 with OPC @ 220kgs, with 20mm and down size graded granite metal coarse aggregates @0.69 cum and fine aggregtes @ 0.56cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2 Page No.13 Item No.4.7	cum							
	for RCC drain								

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	GKVK Main Road Park side		2	190.00	0.90	0.15	51.30		
	1st cross road RHS		2	104.00	0.90	0.15	28.08		
	2nd Cross road RHS		2	104.00	0.90	0.15	28.08		
	LHS 1st cross road		2	27.00	0.90	0.15	7.29		
	LHS 2d cross road		2	27.00	0.90	0.15	7.29		
	3rd Cross road RHS		2	100.00	0.90	0.15	27.00		
	for pcc of kerb								
	GKVK Main Road Park side		2	190.00	0.165	0.10	380.00		
	1st cross road RHS		2	104.00	0.165	0.10	208.00		
	2nd Cross road RHS		2	104.00	0.165	0.10	208.00		
	LHS 1st cross road		2	27.00	0.165	0.10	54.00		
	LHS 2d cross road		2	27.00	0.165	0.10	54.00		
	3rd cross road LHS		2	80.00	0.165	0.10	2.64		
							1055.68		
	for Culvert		8	8.00	1.50	0.15	14.40		
	Basic Rate	5309.00					**1070.08**	**5627.54**	**6021918**
	Area Weightage 6%	318.54							
	Grand Total	5627.54							
4	Providing and laying plain/reinforced cement **concrete for side drains using M20 nominal mix concrete with OPC at 300 kgs.** with 20mm and down size granite metal coarse aggregates at 0.69 cum and fine aggregates at 0.43 cum machine mixed, well compacted for walls and bottom including centering, shuttering, cost of materials, HOM of machinery, curing etc., complete excluding cost of steel as per MORTH specification No. 1500, 1700, 2200. including cost of materials, labour, HOM complete as per specifications. Page No.270. Item No.37.59.1	**cum**							
	for RCC drain								
	GKVK Main Road Park side		2	190.00	0.90	0.15	51.30		
	1st cross road RHS		2	104.00	0.90	0.15	28.08		
	2nd Cross road RHS		2	104.00	0.90	0.15	28.08		
	LHS 1st cross road		2	27.00	0.90	0.15	7.29		
	LHS 2d cross road		2	27.00	0.90	0.15	7.29		
	3rd Cross road RHS		2	100.00	0.90	0.15	27.00		
	for Culvert		8	8.00	1.20	0.25	19.20	**19.20**	
	for side walls								
	GKVK Main Road Park side		2x2	190.00	0.15	0.60	68.40		
	1st cross road RHS		2x2	104.00	0.15	0.60	37.44		
	2nd Cross road RHS		2x2	104.00	0.15	0.60	37.44		
	LHS 1st cross road		2x2	27.00	0.15	0.60	9.72		
	LHS 2d cross road		2x2	27.00	0.15	0.60	9.72		
	3rd Cross road RHS		2x2	100.00	0.15	0.60	36.00		
	for Culvert		2x8	8.00	0.230	0.90	**26.50**	**26.50**	
							393.46		
							393.46	**7273.72**	**2861889.00**
	Basic Rate	6862.00							

	Area Weightage 6%	411.72							
	Grand Total	7273.72							
5	**KSRRB M 2200-6 Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications.** Specification No. MORTH Specification No 1600 & 2200 TMT Bars Fe 500 Page No 229 Item No 28.8.2 SR 2018-19	**Tn**							
	for RCC drain 60 kg/cum		0.060	**347.76**			20.87		
	for RCC drain 90 kg/cum		0.09	***45.70***			4.11		
				393.46			**24.98**	**72316.38**	**1806335.90**
	Basic Rate	68223							
	Area Weightage 6%	4093.38							
	Grand Total	**72316.4**							
6	**Providing and Fixing pre cast covering Slab made out of CC 1:2:4 with 10cm thick and** Finishing cutting , including form work, cost of alll materials, labour,hire charges of chinery,loading ,unloading ,lead and lift, transportation etc ,copmplete. (Data Rate)	**Sqm**							
	GKVK Main Road Park side		2	190.00	0.90		342.00		
	1st cross road RHS		2	104.00	0.90		187.20		
	2nd Cross road RHS		2	104.00	0.90		187.20		
	LHS 1st cross road		2	27.00	0.90		48.60		
	LHS 2d cross road		2	27.00	0.90		48.60		
	3rd Cross road RHS		2	100.00	0.90		180.00		
							993.60	**2337.00**	**2322043.00**
	Date Rate	**2337.00**							
6	**Providing and Fixing pre cast covering Slab 250mm thick made out of CC 1:2:4** and jelly 20mm Down size with steel reinforcement including form work,curing,including cost of alll materials, labour,hire charges of machinery, loading, unloading, lead and lift,transportation etc ,complete.As per Engineer incharge. (Data Rate)								
	for Culvert		8	8.00	1.20		76.80		
							76.80	**5418.00**	**416102.00**
	Date Rate	**5418.00**							

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7	**Providing and fixing pre cast solid cement concrete kerb stones made out of C.C. 1:2:4 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting, including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc., complete. Page No.27. Item No.5.30**	Nos								
	GKVK Main Road Park side			2	190.00			380.00		
	1st cross road RHS			2	104.00			208.00		
	2nd Cross road RHS			2	104.00			208.00		
	LHS 1st cross road			2	27.00			54.00		
	LHS 2d cross road			2	27.00			54.00		
	3rd Cross road RHS			2	80.00			160.00		
								1064.00		
						0.45		**2364.44**		
								2365.00	**432.564**	**1023013.86**
	Basic Rate	408.00								
	Area Weightage 6%	24.48								
	Grand Total	432.564								
8	KSRRB 800-1. Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8 Page No.180. Item No.24.1	sqm								
	GKVK Main Road Park side			2	190.00	0.45		171.00		
	1st cross road RHS			2	104.00	0.45		93.60		
	2nd Cross road RHS			2	104.00	0.45		93.60		
	LHS 1st cross road			2	27.00	0.45		24.30		
	LHS 2d cross road			2	27.00	0.45		24.30		
	3rd Cross road RHS			2	80.00	0.45		72.00		
								478.80	**84.80**	**40602.00**
	Basic Rate	80.00								
	Area Weightage 6%	4.80								
	Grand Total	84.80								
2	KSRRB M500-2 cleaning the existing black topped surface with brooms, soft brushes and finallay dusting with old gunny bags and or compressed air to recived bituminous treatment including cost of all materials labour, HOM of machineries complete as per specification pwd sr 18-19 page no 158 it no 21.2	sq								
	for road									
	GKVK Main Road Park side			1	190.00	8.00		1520.00		
	1st cross road RHS			1	104.00	8.00		832.00		
	2nd Cross road RHS			1	104.00	8.00		832.00		
	LHS 1st cross road			1	27.00	8.00		216.00		

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			1	27.00	8.00		216.00		
	LHS 2d cross road						**3616.00**	**5.62**	**20315.00**
	Basic Rate	5.30							
	Area Weightage 6%	0.32							
	Grand Total	5.62							
10	KSRRB 500-7. **Providing and applying tack coat using 80/100 grade bitumen (VG10) on the** prepared black topped surfaces at 0.25 kg per sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Chapter 5 Page No.158. Item No.21.7	**Sqm**							
	for road								
	GKVK Main Road Park side		1	190.00	8.00		1520.00		
	1st cross road RHS		1	104.00	8.00		832.00		
	2nd Cross road RHS		1	104.00	8.00		832.00		
	LHS 1st cross road		1	27.00	8.00		216.00		
	LHS 2d cross road		1	27.00	8.00		216.00		
	LHS 3rd cross Road		1	27.00	8.00		216.00		
							3832.00		
	consider15% DBM for tack coat						**574.80**		
	Consider full width tack coat for BC						**3832.00**		
							4406.80	**12.72**	**56054.50**
	Basic Rate	12.00							
	Area Weightage 6%	0.72							
	Grand Total	12.72							
11	**KSRRB M500-17. Providing and laying Dense Graded Bituminous Macadam using crushed aggregates of specified grading,** premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10 complete in all respects complete as per specifications. MORTH Specification No. 507. Using 100/120 TPH capacity HMP with sensor paver Gr-II (50 mm to 75mm) with 4.5% VG-30 Bitumen. Page No.160. Item No.21.17.2	**Cum**							
	for road								
	GKVK Main Road Park side		1	190.00	8.00	0.05	76.00		
	1st cross road RHS		1	104.00	8.00	0.05	41.60		
	2nd Cross road RHS		1	104.00	8.00	0.05	41.60		
			1	27.00	8.00	0.05	10.80		
	LHS 1st cross road								

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	LHS 2d cross road		1	27.00	8.00	0.05	10.80		
	LHS 3rd cross Road		1	27.00	8.00	0.05	10.80		
	consider15%						191.60		
		consider15% camber correction of road					28.74	7620.34	219009.00
	Basic Rate	7189.00							
	Area Weightage 6%	431.34							
	Grand Total	7620.34							
12	Providing and laying **bituminous concrete 40mm thick with hot mix plant, using crushed aggregates of specified grading, premixed with** bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. Clause 507 of MORTH V revision as per IRC SP- 53-2015.do- using 40-60 TPH capacity HMP with mechanical paver grading II (30-45mm) with 5.4% of modified bituminous binder consisting of 4.97% ofVG-30 bitumen (60/70 grade} and 0.43% of plastomeric thermoplastics (waste plastic) Page No. 171. Item No.21.78.12	**Cum**							
	for road								
	GKVK Main Road Park side		1	190.00	8.00	0.04	60.80		
	1st cross road RHS		1	104.00	8.00	0.04	33.28		
	2nd Cross road RHS		1	104.00	8.00	0.04	33.28		
	LHS 1st cross road		1	27.00	8.00	0.04	8.64		
	LHS 2d cross road		1	27.00	8.00	0.04	8.64		
	LHS 3rd cross Road		1	27.00	8.00	0.04	8.64		
							153.28	**8699.42**	**1333447.00**
	Basic Rate	8207.00							
	Area Weightage 6%	492.42							
	Grand Total	8699.42							
13	**Providing and fixing of retro - reflectorised cautionary, mandatory and informatory sign as per IRC:67 made of high intensity grade sheeting vide Clause** 801.3, fixed over aluminium sheeting, 1.5 mm thick supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M 15 grade cement concrete 45 em x 45 cm x 60 em, 60 cm below ground level as per approved drawing Page No.180. Item No.24.2	**Nos**							

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	GKVK Main Road Park side		2	95.00			190.00		
	1st cross road RHS		2	52.00			104.00		
	2nd Cross road RHS		2	52.00			104.00		
	LHS 1st cross road		2	13.00			26.00		
	LHS 2d cross road		2	13.00			26.00		
	LHS 3rd cross Road		2	13.00			26.00		
							476.00	**137.80**	**65593.00**
	Basic Rate	130.00							
	Area Weightage 6%	7.80							
	Grand Total	137.80							
14	**KSRRB M800-4. Direction and Place Identification Signs / Project Information Board with size more than 0.9 sqm Size Board:-Providing** and erecting direction and place identification retro- reflectorised sign as per IRC:67 made of high intensity grade sheeting vide Clause 801.3, fixed over aluminium sheeting, 2 mm thick with area not exceeding 0.9 sqm supported on a mild steel single angle iron post 75 x 75 x 6 mm , 2 Nos. firmly fixed to the ground by means of properly designed foundation with M 15 grade cement concrete 45 x 45 x 60 em, 60 em below ground level as per approved drawing. Page No.180. Item No.24.4	Nos							
			3	1.00			3.00		
							2.00	**7567.34**	**15135.00**
	Basic Rate	7139.00							
	Area Weightage 6%	428.34							
	Grand Total	7567.34							
15	**KSRRB M800-13. Road Marking with Hot Applied 'Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface:-** Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803 Page No.182. Item No.24.15	Sqm							
	for road								
	GKVK Main Road Park side		1	126.67	0.10		12.67		
			2	190.00	0.15		57.00		
			1	69.33	0.10		6.93		
	1st cross road RHS		2	104.00	0.15		31.20		

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			1	69.33	0.10		6.93		
	2nd Cross road RHS		2	104.00	0.15		31.20		
			1	18.00	0.10		1.80		
	LHS 1st cross road		2	27.00	0.15		8.10		
			1	18.00	0.10		1.80		
	LHS 2d cross road		2	27.00	0.15		8.10		
							165.73	**454.74**	**75365.00**
	Basic Rate	429.00							
	Area Weightage 6%	25.74							
	Grand Total	454.74							
16	**for Rain water harvesting work including 40mm jelly,20mm jelly coarse sand, fine sand,12.5mm chips as per data rates**	Nos	5				5.00	**20882.00**	**104410**
					Total construction cost				**16788665.26**
					GST 12%				**2014639.83**
					DPR & PMC 2%				**335773.31**
					Tender Premium 5%				**839433.26**
									21488.34
	Miscellaneous charges							**Total**	**20000000.00**

(Rupees Two Crore Only)

CERTIFICATE

1. The work spot has been inspected and the work is found necessary.
2. This estimate is prepared as per C.S.R. of 2018-19
3. The provisions were made in this estimate are necessary and adequate.
4. This works come under B.B.M.P. limits.

Assistant Engineer

Assistant Executive Engineer
Yelahanka Sub Division
Bangalore-64

Executive Engineer
Yelahanka Division
Bangalore-64

AARTN ASSOCIATES BANGALORE

BRUHAT BANGALORE MAHANAGARA PALIKE									
YELAHANKA ZONE									
					Estimate Cost Rs.			20000000.00	

Name of Work: Detailed Estimate for the work of Improvements to roads and drains at Jaimuninagara and Udayanagara in Kempegowda ward no -01 of yelahanka Sub division.

Sl No	Description of item	Unit	No	L	B	D	Qty	Rate	Amount
1	KSRRB M300-14. Excavation for roadwork in all types of soil by mechanical means including cutting and loading to tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transportation with a lead of 1.00 km and complete as per specifications. MORTH Specification No.301 Page No.143. Item No.19.14	cum							
	for road								
	Komaladevi enclave 1st cross		1	260.00	7.00	0.25	455.00		
	Komaladevi enclave 2nd cross		1	260.00	7.00	0.25	455.00		
							910.00	125.59	114286.00
	Basic Rate	41.00							
	Area Weightage 6%	2.46							
	Grand Total	43.46							
	Loading and unloading + Basic Rate for Haulage upto 8.00 k.m =(1.28 X 2.50 X 8)+ 57	77.48							
	Area Weightage 6%	4.65							
		125.59							
2	KSRB 2-2.1 : Earthwork excavation by manual means for foundation of buildings, culverts, water supply and sanitary lines and electrical conduits etc, either in pits or in trenches 1.5m and above in width, in ordinary soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. including breaking of clods complete as per specifications. No. KBS 2.1 (a) I 2.3.5 page no 6	cum							
	for RCC drain								
	Komaladevi enclave 1st Main Road		2	260.00	1.00	1.00	520.00		
	Komaladevi enclave 2nd Main Road		2	260.00	1.00	1.00	520.00		
	for culverts								
	Komaladevi enclave 1st & 2nd Main Road		3	8.00	1.65	1.20	47.52		
	for kerb								
	Komaladevi enclave 1st cross		2	260.00	0.165	0.25	21.45		

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	Komaladevi enclave 2nd cross		2	260.00	0.165	0.25	21.45		
	Udaya Nagar Main Road 4th A Cross		1	100.00	0.165	0.25	4.13		
							1134.55	**399.07**	**452762.00**
	Basic Rate	299.00							
	Area Weightage 6%	17.94							
	Grand Total	316.94							
	Loading and unloading + Basic Rate for Haulage upto 8.00 k.m =(1.28 X 2.50 X 8)+ 57	77.48							
	Area Weightage 6%	4.65							
		399.07							
3	**KSRB 4-1.7 : Providing and laying in position plain cement concrete of Mix 1:3:6 with OPC @ 220kgs, with 20mm and down size graded granite metal coarse aggregates @0.69 cum** and fine aggregtes @ 0.56cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2 Page No.13 Item No.4.7	cum							
	Komaladevi enclave 1st Main Road		2	260.00	1.00	0.15	78.00		
	Komaladevi enclave 2nd Main Road		2	260.00	1.00	0.15	78.00		
	for culverts								
	Komaladevi enclave 1st & 2nd Main Road		3	8.00	1.65	0.15	5.94		
	for kerb								
	Komaladevi enclave 1st cross		2	260.00	0.165	0.10	8.58		
	Komaladevi enclave 2nd cross		2	260.00	0.165	0.10	8.58		
	Udaya Nagar Main Road 4th A Cross		1	100.00	0.165	0.10	1.65		
							180.75	**5627.54**	**1017178.00**
	Basic Rate	5309.00							
	Area Weightage 6%	318.54							
	Grand Total	5627.54							
4	Providing and laying **plain/reinforced cement concrete for side drains using M20 nominal mix concrete with OPC at 300 kgs**. with 20mm and down size granite metal coarse aggregates at 0.69 cum and fine aggregates at 0.43 cum machine mixed, well compacted for walls and bottom including centering, shuttering, cost of materials, HOM of machinery, curing etc., complete excluding cost of steel as per MORTH specification No. 1500, 1700, 2200. including cost of materials, labour, HOM complete as per specifications. Page No.270. Item No.37.59.1	cum							

	for bed								
	Komaladevi enclave 1st Main Road		2	260.00	0.90	0.15	70.20		
	Komaladevi enclave 2nd Main Road		2	260.00	0.90	0.15	70.20		
	culvert								
	Komaladevi enclave 1st & 2nd Main Road		3	8.00	1.20	0.25	7.20		
							0.00		
	Side walls								
	Komaladevi enclave 1st Main Road		4	260.00	0.15	0.75	117.00		
	Komaladevi enclave 2nd Main Road		4	260.00	0.15	0.75	117.00		
	for culverts								
	Komaladevi enclave 1st & 2nd Main Road		6	8.00	0.230	0.90	9.94		
							391.54	***7273.72***	**2847923.00**
	Basic Rate	6862.00							
	Area Weightage 6%	411.72							
	Grand Total	7273.72							
5	KSRRB M 2200-6 **Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending,** hooking, placing in position, lapping and or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. MORTH Specification No 1600 & 2200 TMT Bars Fe 500 Page No 229 I. No 28.8.2 SR 18-19	**Tn**							
	for RCC drain 60 kg/cum		0.060	**374.40**			22.46		
	for Culverts 90 kg/cum		0.090	**17.14**			1.54		
				391.54			**24.01**	**72326.98**	**1736299.00**
	Basic Rate	68233.00							
	Area Weightage 6%	4093.98							
	Grand Total	72326.98							
6	**Providing and Fixing pre cast covering Slab made out of CC 1:2:4 with 10cm thick and** Finishing cutting , including form work, cost of alll materials, labour,hire charges of chinery,loading ,unloading ,lead and lift, transportation etc copmplete. (Data Rate)	**Sqm**							
	Komaladevi enclave 1st Main Road		2	260.00	0.90		468.00		
	Komaladevi enclave 2nd Main Road		2	260.00	0.90		468.00		
							936.00	**2337.00**	**2187432.00**
	Date Rate	**2337.00**							

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7	**Providing and Fixing pre cast covering Slab 250mm thick made out of CC 1:2:4** and jelly 20mm Down size with steel reinforcement including form work,curing,including cost of alll materials, labour,hire charges of machinery, loading, unloading, lead and lift,transportation etc ,complete.As per Engineer incharge. (Data Rate)	**Sqm**							
	Komaladevi enclave 1st & 2nd Main Road		3	8.00	1.20		28.80		
							28.80	**5418.00**	**156038.00**
	Date Rate	**5418.00**							
8	**Providing and fixing pre cast solid cement concrete kerb stones made out of C.C. 1:2:4 with top and bottom width 114 and** 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting, including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc., complete. Page No.27. Item No.5.30	**Nos**							
	Komaladevi enclave 1st cross		2	260.00			520.00		
	Komaladevi enclave 2nd cross		2	260.00			520.00		
	Udaya Nagar Main Road 4th A Cross		1	100.00			100.00		
							1140.00		
					0.45		2533.33		
							2530.00	**432.600**	**1094478.00**
	Basic Rate	408.00							
	Area Weightage 6%	24.48							
	Grand Total	432.600							
9	KSRRB 800-1. Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8 Page No.180. Item No.24.1	**sqm**							
	Komaladevi enclave 1st cross		2	260.00	0.45		234.00		
	Komaladevi enclave 2nd cross		2	260.00	0.45		234.00		
	Udaya Nagar Main Road 4th A Cross		1	100.00	0.45		45.00		
							513.00	**84.80**	**43502.00**
	Basic Rate	80.00							
	Area Weightage 6%	4.80							
	Grand Total	84.80							
	for CC road								

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10	KSRRB M200-24. Dismantling of cement concrere pavement by mechanical means using pneumatic tools ,breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations and disposal of dismantled materials stacking serviceable and unserviceable materials separately complete as per specifications.MORTH Specification No.202 ,PAge No 140 Item no 18.47	Cum							
	for CC road								
	Udaya Nagar Main Road 4th Cross		1	32.00	4.00	0.20	25.60		
	Udaya Nagar Main Road 4th A Cross		1	127.00	4.00	0.20	101.60		
	Udaya Nagar Main Road 4th A -LHS 1st Cross		1	28.00	3.50	0.20	19.60		
	Udaya Nagar Main Road 4th A -LHS 2nd Cross		1	28.00	3.50	0.20	19.60		
	Udaya Nagar Main Road 4th A -LHS 3rd Cross		1	28.00	3.50	0.20	19.60		
	Udaya Nagar Main Road 4th A -LHS 4th Cross		1	28.00	3.50	0.20	19.60		
	Udaya Nagar Main Road 4th A -LHS 5th Cross		1	28.00	3.50	0.20	19.60		
	Udaya Nagar Main Road 4th A - RHS 1st Cross		1	38.00	4.00	0.20	30.40		
	Udaya Nagar Main Road 4th A - RHS 2nd Cross		1	38.00	4.00	0.20	30.40		
	Udaya Nagar Main Road 4th A - RHS 3rd Cross		1	38.00	4.00	0.20	30.40		
	Udaya Nagar Main Road 4th A - RHS 4th Cross		1	38.00	4.00	0.20	30.40		
							346.80	**952.94**	**330480.00**
	Basic Rate	899.00							
	Area Weightage 6%	53.94							
	Grand Total	952.94							

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11	**KSRRB M600-1. Construction of dry lean cement concrete mix CC 1:5:10 with OPC cement @160Kgs, with 25mm and down size graded granite metal coarse aggregate at 0.86cum and** fine aggregates @ 0.58cum Sub-base over a prepared sub-grade with (coarse and fine aggregate conforming to IS: 383) aggregate cement ratio not to exceed 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content not to be less than 160 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver with electronic sensor, compacting with 8-10 tonnes vibratory roller, finishing and curing complete as per specifications. MORTH Specification No. 601 of MORTH V Revision and IS 456 Table-5 22.1.1 -do- with OPC at 150 kg/cum and coarse aggregate 0.86cum, fine aggregate 0.58cum using Concrete Batch mix Plant at 75 cum/hr capacity with Slip form paver with electronic sensor Page No.174. Item No.22.1.1	**Cum**							
	for CC road								
	Udaya Nagar Main Road 4th Cross		1	32.00	4.00	0.15	19.20		
	Udaya Nagar Main Road 4th A Cross		1	127.00	4.00	0.15	76.20		
	Udaya Nagar Main Road 4th A -LHS 1st Cross		1	28.00	3.50	0.15	14.70		
	Udaya Nagar Main Road 4th A -LHS 2nd Cross		1	28.00	3.50	0.15	14.70		
	Udaya Nagar Main Road 4th A -LHS 3rd Cross		1	28.00	3.50	0.15	14.70		
	Udaya Nagar Main Road 4th A -LHS 4th Cross		1	28.00	3.50	0.15	14.70		
	Udaya Nagar Main Road 4th A -LHS 5th Cross		1	28.00	3.50	0.15	14.70		
	Udaya Nagar Main Road 4th A - RHS 1st Cross		1	38.00	4.00	0.15	22.80		
	Udaya Nagar Main Road 4th A - RHS 2nd Cross		1	38.00	4.00	0.15	22.80		
	Udaya Nagar Main Road 4th A - RHS 3rd Cross		1	38.00	4.00	0.15	22.80		
	Udaya Nagar Main Road 4th A - RHS 4th Cross		1	38.00	4.00	0.15	22.80		
							260.10	**3800.10**	**988406.00**
	Basic Rate	3585.00							
	Area Weightage 6%	215.10							
	Grand Total	3800.10							

12	Constructing un-reinforced, plain cement concrete for pavements using Grade concrete M30 over a prepared base with OPC coarse aggregate at 0.69 cum, fine aggregates at 0.46 cum,Coarse and fine aggregate conforming to IS:383-2016, with Superplastizer at 3 lts conforming to IS 9103-2008. mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). & Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished with floaters in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, including groove cutting charges, joint filler, separation membrane of impermiable plastic sheet of 125 micron, sealant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades, textured with texturing machine, and curing including cost of all materials, labour,hire charges of machineries,all lead & lift charges etc., complete as per specifications. do- with OPC at 360 kg/cum and coarse aggregate 0.69cum, fine aggregate 0.46cum. Page No.176. Item No.22.6.1	Cum							
	for CC road								
	Udaya Nagar Main Road 4th Cross		1	32.00	4.00	0.15	19.20		
	Udaya Nagar Main Road 4th A Cross		1	127.00	4.00	0.15	76.20		
	Udaya Nagar Main Road 4th A -LHS 1st Cross		1	28.00	3.50	0.15	14.70		
	Udaya Nagar Main Road 4th A -LHS 2nd Cross		1	28.00	3.50	0.15	14.70		
	Udaya Nagar Main Road 4th A -LHS 3rd Cross		1	28.00	3.50	0.15	14.70		
	Udaya Nagar Main Road 4th A -LHS 4th Cross		1	28.00	3.50	0.15	14.70		
	Udaya Nagar Main Road 4th A -LHS 5th Cross		1	28.00	3.50	0.15	14.70		
	Udaya Nagar Main Road 4th A -RHS 1st Cross		1	38.00	4.00	0.15	22.80		
	Udaya Nagar Main Road 4th A -RHS 2nd Cross		1	38.00	4.00	0.15	22.80		
	Udaya Nagar Main Road 4th A -RHS 3rd Cross		1	38.00	4.00	0.15	22.80		
	Udaya Nagar Main Road 4th A -RHS 4th Cross		1	38.00	4.00	0.15	22.80		
							260.10	**5210.96**	**1355371.00**
	Basic Rate	4916.00							
	Area Weightage 6%	294.96							
	Grand Total	5210.96							
	for Asphalt road								

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13	**Construction of granular sub-base Grading-V as Sub-base and drainage layer by providing** coarse graded crushed stone aggregates of granite/trap/basalt material, mixing by mix in place method byrotavator at OMC, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications. Clause 401 of MORTH V Revision. Page No.153. Item No.20.6	**cum**							
	Komaladevi enclave 1st cross		1	260.00	7.00	0.15	273.00		
	Komaladevi enclave 2nd cross		1	260.00	7.00	0.15	273.00		
							546.00	**1855.00**	**1012830.00**
	Basic Rate	1750.00							
	Area Weightage 6%	105.00							
	Grand Total	1855.00							
14	**KSRRB M400-17. Providing, laying, spreading and compacting crushed stone aggregates of granite / trap / basalt to wet mix macadam** specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications. MORTH Specification No. 406. Page No.155. Item No.20.18	**cum**							
	Komaladevi enclave 1st cross		1	260.00	7.00	0.15	273.00		
	Komaladevi enclave 2nd cross		1	260.00	7.00	0.15	273.00		
							546.00	**2001.28**	**1092699.00**
	Basic Rate	1888.00							
	Area Weightage 6%	113.28							
	Grand Total	2001.28							
15	**KSRRB M500-6. Providing and applying primer coat with S.S. bitumen emulsion** on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications Clause 502 of MORTH V revision(P.No-158,I No-21.6)	**sqm**							
	Komaladevi enclave 1st cross		1	260.00	7.00		1820.00		
	Komaladevi enclave 2nd cross		1	260.00	7.00		1820.00		
							3640.00	33.92	**123469.00**
	Basic Rate	32.00							
	Area Weightage 6%	1.92							
	Grand Total	33.92							

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16	**KSRRB M500-17. Providing and laying Dense Graded Bituminous Macadam using crushed aggregates of specified grading,** premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10 complete in all respects complete as per specifications. MORTH Specification No. 507. Using 100/120 TPH capacity HMP with sensor paver Gr-II (50 mm to 75mm) with 4.5% VG-30 Bitumen. Page No.160. Item No.21.17.2	**Cum**							
	DBM for camber corrections								
	Komaladevi enclave 1st cross		1	260.00	3.00	0.05	39.00		
	Komaladevi enclave 2nd cross		1	260.00	3.00	0.05	39.00		
							78.00		
							78.00	**7620.34**	**594387.00**
	Basic Rate	7189.00							
	Area Weightage 6%	431.34							
	Grand Total	7620.34							
17	**KSRRB 500-7. Providing and applying tack coat using 80/100 grade bitumen (VG10) on the** prepared black topped surfaces at 0.25 kg per sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Chapter 5 Page No.158. Item No.21.7	**Sqm**							
	Komaladevi enclave 1st cross		1	260.00	7.00		1820.00		
	Komaladevi enclave 2nd cross		1	260.00	7.00		1820.00		
							3640.00	**12.72**	**46301.00**
	Basic Rate	12.00							
	Area Weightage 6%	0.72							
	Grand Total	12.72							

18	**Providing and laying bituminous concrete 40mm thick with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous** binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. Clause 507 of MORTH V revision as per IRC SP-53-2015.do- using 40-60 TPH capacity HMP with mechanical paver grading II (30-45mm) with 5.4% of modified bituminous binder consisting of 4.97% ofVG-30 bitumen (60/70 grade} and 0.43% of plastomeric thermoplastics (waste plastic) Page No. 171. Item No.21.78.12	**Cum**							
	Komaladevi enclave 1st cross		1	260.00	7.00	0.04	72.80		
	Komaladevi enclave 2nd cross		1	260.00	7.00	0.04	72.80		
							145.60	**8699.42**	**1266636.00**
	Basic Rate	8207.00							
	Area Weightage 6%	492.42							
	Grand Total	8699.42							
19	**Providing and fixing of retro - reflectorised cautionary, mandatory and informatory sign as per IRC:67 made of high intensity grade sheeting vide Clause** 801.3, fixed over aluminium sheeting, 1.5 mm thick supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M 15 grade cement concrete 45 em x 45 cm x 60 em, 60 cm below ground level as per approved drawing Page No.180. Item No.24.2	**Nos**							
	Komaladevi enclave 1st cross		2	130.00			260.00		
	Komaladevi enclave 2nd cross		2	130.00			260.00		
							520.00	**137.80**	**71656.00**
	Basic Rate	130.00							
	Area Weightage 6%	7.80							
	Grand Total	137.80							

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20	**KSRRB M800-4. Direction and Place Identification Signs / Project Information Board with size more than 0.9 sqm Size Board:-Providing** and erecting direction and place identification retro- reflectorised sign as per IRC:67 made of high intensity grade sheeting vide Clause 801.3, fixed over aluminium sheeting, 2 mm thick with area not exceeding 0.9 sqm supported on a mild steel single angle iron post 75 x 75 x 6 mm , 2 Nos. firmly fixed to the ground by means of properly designed foundation with M 15 grade cement concrete 45 x 45 x 60 em, 60 em below ground level as per approved drawing. Page	Nos								
				5	1.00			5.00		
								5.00	**7567.34**	**37837.00**
	Basic Rate	7139.00								
	Area Weightage 6%	428.34								
	Grand Total	7567.34								
21	**KSRRB M800-13. Road Marking with Hot Applied 'Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface:-** Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803 Page No.182. Item No.24.15	Sqm								
	Komaladevi enclave 1st cross			1	173.00	0.10		17.30		
				2	260.00	0.15		78.00		
	Komaladevi enclave 2nd cross			1	173.00	0.10		17.30		
				2	260.00	0.15		78.00		
								190.60	**454.74**	**86673.00**
	Basic Rate		429.00							
	Area Weightage 6%		25.74							
	Grand Total		454.74							
23	for Rain water harvesting work including 40mm jelly, 20mm jelly coarse sand, fine sand, 12.50 mm chips as per data rates	Nos		7				7	20882.00	146174.00

					Total construction cost	16802817.00
					GST 12%	2016338.04
					DPR & PMC 2%	336056.34
					Tender Premium 5%	840140.85
						4647.77
					Total	20000000.00
24	Miscellaneous charges					
	(Rupees Two Crore Only)					

CERTIFICATE

1. The work spot has been inspected and the work is found necessary.
2. This estimate is prepared as per C.S.R. of 2018-19
3. The provisions were made in this estimate are necessary and adequate.
4. This works come under B.B.M.P. limits.

AARTN ASSOCIATES BANGALORE

Assistant Engineer

Assistant Executive Engineer
Yelahanka Sub Division
Bangalore-64

Executive Engineer
Yelahanka Division
Bangalore-64

Improvements to roads and drains at Kurlappa layout munithimmayya layout in kempegowda ward no-01 of Yelahanka Sub Division.(GO SI No.86)

Estimated Cost :150.00 Lakhs

Index:

	Kurlappa Layout Main road
	Cross roads
	Kogilu main road

Asst. Executive Engineer
Yelahanka Sub. Division
(BBMP Ynk. Zn)